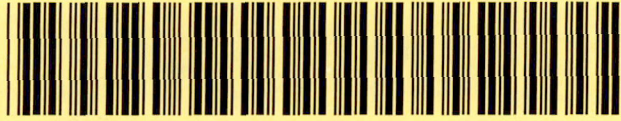


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Site Name TWIN LAKES SUBDIVISION

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Division WASTE MANAGEMENT

Section SUPERFUND

Program IHS (IHS)

DocCat FACILITY



North Carolina Department of Environment and Natural Resources

Dexter R. Matthews, Director

Division of Waste Management

Michael F. Easley, Governor
William G. Ross Jr., Secretary

November 21, 2008

Mr. Travis W. Cope
Senior Regional Counsel
Texas and Southeast
KB Home
4800 Fredericksburg Road
San Antonio, Texas 78229

Subject: No Further Action Letter
Twin Lakes Subdivision site
Morrisville, Wake County

STATE FILE

STATE FILE

Dear Mr. Cope:

I reviewed the September 3, 2008, Additional Remedial Investigation Twin Lakes Subdivision report ("Report") prepared by ECS Carolinas, LLP for KB Home. The Report indicates the confirmation soil samples collected for volatiles (specifically- xylene and ethylbenzene) at 403 Elm Farm Place (Lot 538- AOC 21) and at 555 Abbey Fields Loop (Lot 548-AOC 22) are below Inactive Hazardous Sites Branch (Branch) soil remediation goals (SRGs). The Report also indicates all excavated soil has been removed and properly disposed in a Subtitle D landfill.

Since the soils are below SRGs and all stockpiled contaminated soil has been removed from the site, no further remediation will be required at the site unless the Department later determines, based on new information or information not previously provided to the Department, that the site has not been remediated to unrestricted use standards or that the Department was provided with false or incomplete information.

Sincerely,

Keith Snavelly, Hydrogeologist
Inactive Hazardous Sites Branch
Superfund Section

cc: Glen Dunn, Poyner & Spruill
Mark Brown, ECS LLP.

MAIL AND COPY DISTRIBUTION INSTRUCTION SHEET

Print Form

Person Completing Form: Keith SnavellyDate: 11/21/08Project/Item: (example: Dupont letter of 1/1/05)
KIB Home - No Further Action Letter

Method of Mailing Original:

- ☐ Interoffice, Courier or Internal Distribution, as appropriate
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☐ Overnight Delivery (Service Used (circle one): Fed Ex; UPS; USPS; Other _____)
☐ 2nd Day (Service Used (circle one): Fed Ex; UPS; USPS; Other _____)
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☐ Mail/distribute copy of letter to all cc's; with attachments
☐ Mail /distribute copy of letter; include attachments as indicated after recipient's name
☐ No copies to mail or distribute
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STATE FILE

CC Addresses:

Glen Dunn
Poyner & Spruill
3600 Glenwood Avenue, P.O. Box 10096
Raleigh NC 27605-0096

Mark Brown
ECS Carolinas, LLP
9001 Glenwood Avenue
Raleigh NC 27617

Date Completed: 11/21/08Completed by: SLBB _____ SH ☒ DG _____ SL _____

Snavely, Keith

From: Dunn, Glenn [hgduinn@poynerspruill.com]
Sent: Monday, September 29, 2008 2:01 PM
To: Keith Snavely
Subject: RE: Twin Lakes No Further Action

Keith, thanks for the message. The no-further action letter can be made out to:
Travis W. Cope
Senior Regional Counsel
Texas and Southeast
KB Home
4800 Fredericksburg Road
San Antonio ,Texas 78229

Please make out an invoice for payment of the \$500 and state in it the regulation or statute authorizing it and send it to me .I will pass it on to Mr. Cope. The letter can go directly to him when it is ready, but please be sure to copy me. Thanks.

-----Original Message-----

From: Keith Snavely [mailto:Keith.Snavely@ncmail.net]
Sent: Monday, September 29, 2008 1:01 PM
To: Dunn, Glenn
Subject: Twin Lakes No Further Action

Glenn:

I want to find out who I should address the No Further Action Letter to at KB Home for the final removal actions at the Twin Lakes Subdivision. I know you mentioned that you wanted me to send all correspondence through you or to the KB Home attorney. I have misplaced his address, can you please send it to me? But, before I mail it out to KB Home there is a fee of \$500 for the no action further review. KB Home can address the check to:

NC Division of Waste Management.

and send the check to: Keith Snavely, Hydrogeologist
NC Division of Waste Management
401 Oberlin Road, Suite 150
Raleigh, NC 27605

If you have any questions, I can be reached at (919) 508-8479.

Sincerely

Keith Snavely, Hydrogeologist
Inactive Hazardous Sites Branch
Superfund Section

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Snavely, Keith

From: Keith Snavely [Keith.Snavely@ncmail.net]
Sent: Monday, September 29, 2008 1:01 PM
To: hgdunn
Subject: Twin Lakes No Further Action

Glenn:

I want to find out who I should address the No Further Action Letter to at KB Home for the final removal actions at the Twin Lakes Subdivision. I know you mentioned that you wanted me to send all correspondence through you or to the KB Home attorney. I have misplaced his address, can you please send it to me? But, before I mail it out to KB Home there is a fee of \$500 for the no action further review. KB Home can address the check to:

NC Division of Waste Management.

and send the check to: Keith Snavely, Hydrogeologist
NC Division of Waste Management
401 Oberlin Road, Suite 150
Raleigh, NC 27605

If you have any questions, I can be reached at (919) 508-8479.

Sincerely

Keith Snavely, Hydrogeologist
Inactive Hazardous Sites Branch
Superfund Section

Snavely, Keith

From: Keith Snavely [Keith.Snavely@ncmail.net]
Sent: Friday, September 26, 2008 6:07 PM
To: SMBrown
Subject: Re: Twin Lakes Report

I got half the way through it- I will finish on Monday.

Keith

SMBrown wrote:

> Thanks
>
> Mark Brown, LG, PG, RSM
> Principal Geologist
>
> ECS Carolinas LLP
> 9001 Glenwood Avenue
> Raleigh, NC 27617
>
> 919.861.9910 (Switchboard)
> 919.861.9861 (Direct)
> 919.861.9911 (Fax)
> 919.291.9200 (Cell)
>
> www.ecslimited.com
>
> "If you find a path without obstacles, it probably doesn't lead
> anywhere!"
> -Frank A. Clark
>
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> proprietary. If you are not the named recipient, you are kindly
> requested to notify the sender immediately and to delete this message,
> including any attachment, from your system. You are not allowed to
> copy, use or maintain this message, and the contents hereof must not
> be disclosed to any other person.
>
>
> -----Original Message-----
> From: Keith Snavely [mailto:Keith.Snavely@ncmail.net]
> Sent: Wednesday, September 24, 2008 4:34 PM
> To: SMBrown
> Subject: Re: Twin Lakes Report
>
> I haven't been able to complete the review. I will get back with you
> late Friday.
>
> Keith
>
>
> SMBrown wrote:
>
>> Any comments on the final Twin Lakes Report?

>>
>>
>>
>> **Mark Brown, LG, PG, RSM**
>>
>> //Principal Geologist//
>>
>>
>>
>> ECS Carolinas LLP
>>
>> 9001 Glenwood Avenue
>>
>> Raleigh, NC 27617
>>
>>
>>
>> 919.861.9910 (Switchboard)
>>
>> 919.861.9861 (Direct)
>>
>> 919.861.9911 (Fax)
>>
>> 919.291.9200 (Cell)
>>
>>
>>
>> www.ecslimited.com <<http://www.ecslimited.com>>
>>
>>
>>
>> /*/"If you find a path without obstacles, it probably doesn't lead
>> anywhere!"/*/
>>
>> /*/-Frank A. Clark/*/
>>
>>
>>
>> /This message, including any attachment hereto, is confidential and
>> proprietary. If you are not the named recipient, you are kindly
>> requested to notify the sender immediately and to delete this
>> message,
>>
>
>
>> including any attachment, from your system. You are not allowed to
>> copy, use or maintain this message, and the contents hereof must not
>> be disclosed to any other person./
>>
>>
>>
>>
>
>

Snavely, Keith

From: Keith Snavely [Keith.Snavely@ncmail.net]
Sent: Wednesday, September 24, 2008 4:34 PM
To: SMBrown
Subject: Re: Twin Lakes Report

I haven't been able to complete the review. I will get back with you late Friday.

Keith

SMBrown wrote:

>
> Any comments on the final Twin Lakes Report?
>
>
>
> **Mark Brown, LG, PG, RSM**
>
> //Principal Geologist//
>
>
> ECS Carolinas LLP
>
> 9001 Glenwood Avenue
>
> Raleigh, NC 27617
>
>
>
> 919.861.9910 (Switchboard)
>
> 919.861.9861 (Direct)
>
> 919.861.9911 (Fax)
>
> 919.291.9200 (Cell)
>
>
>
> www.ecslimited.com <<http://www.ecslimited.com>>
>
>
>
> /*/"If you find a path without obstacles, it probably doesn't lead
> anywhere!"/*/
>
> /*/-Frank A. Clark/*/
>
>
>
> /This message, including any attachment hereto, is confidential and
> proprietary. If you are not the named recipient, you are kindly
> requested to notify the sender immediately and to delete this message,

> including any attachment, from your system. You are not allowed to
> copy, use or maintain this message, and the contents hereof must not
> be disclosed to any other person./
>
>
>

Snavely, Keith

From: SMBrown [SMBrown@ecslimited.com]
Sent: Wednesday, September 24, 2008 3:49 PM
To: Keith Snavely
Subject: Twin Lakes Report

Any comments on the final Twin Lakes Report?

Mark Brown, LG, PG, RSM
Principal Geologist

ECS Carolinas LLP
9001 Glenwood Avenue
Raleigh, NC 27617

919.861.9910 (Switchboard)
919.861.9861 (Direct)
919.861.9911 (Fax)
919.291.9200 (Cell)

www.ecslimited.com

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-Frank A. Clark

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Snavely, Keith

From: Keith Snavely [Keith.Snavely@ncmail.net]
Sent: Thursday, July 24, 2008 5:16 PM
To: SMBrown
Subject: Re: Twin Lakes Subdivision, Morrisville, NC

Mark,

Any updates on the final soil excavation at the lot at Twin Lakes in Morrisville. Give me call if you can.

Keith

SMBrown wrote:

> Several things have happened in the last few days.
> 1) Christina has also left ECS, possibly to go to work with Ryan.
> 2) One of the samples collected on June 7 contained elevated levels
> (2800 ppm) of xylene.
> 3) KB is in the process of notifying the homeowners that we have
> tentatively scheduled excavation to take place on June 25th. We
> anticipate one truckload of soil with inert concrete debris.
> 4) I will personally lead this excavation so we can excavate and
> backfill in one day.
>
> Please contact me if you have any questions or would like to come
> observe our operation.
>
> Mark Brown, LG, PG, RSM
> Principal Geologist
> Environmental Services Department Manager
> 9001 Glenwood Avenue
> Raleigh, NC 27617
>
> 919.861.9910 (Switchboard)
> 919.861.9861 (Direct)
> 919.861.9911 (Fax)
> 919.291.9200 (Cell)
>
> www.ecslimited.com
>
> "If you find a path without obstacles, it probably doesn't lead
> anywhere!"
> -Frank A. Clark
>
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> including any attachment, from your system. You are not allowed to
> copy, use or maintain this message, and the contents hereof must not
> be disclosed to any other person.
>
>
> -----Original Message-----
> From: Keith Snavely [mailto:Keith.Snavely@ncmail.net]

> Sent: Tuesday, June 17, 2008 4:41 PM
> To: CBreen
> Subject: Re: Twin Lakes Subdivision, Morrisville, NC
>
> Christina:
>
> I apologize for misplacing your last email. You indicated if it
> would be OK if Mark Brown samples around the vicinity of the
> contaminated soil sample prior to ESC's plans of soil excavation at
> AOC 22. That is fine with me. I hope I have not held you up and that
> you have already conducted the soil sampling.
>
> Keith
>
>
>
> CBreen wrote:
>
>> Mr. Snavelly,
>>
>>
>> Thank you for your response. We will schedule the removal at AOC 22
>>
> for
>
>> as soon as possible. I will notify you of the removal date as soon as
>>
> I
>
>> have one.
>>
>> Christina Breen
>>
>> Senior Environmental Scientist
>>
>>
>>
>> ECS Carolinas, LLP
>>
>> 9001 Glenwood Avenue
>>
>> Raleigh, NC 27617
>>
>> Office: 919.861.9839
>>
>> Fax: 919.861.9911
>>
>> Cell: 919.427.2601
>>
>>
>> -----Original Message-----
>> From: Keith Snavelly [mailto:Keith.Snavelly@ncmail.net]
>> Sent: Monday, June 02, 2008 11:49 am
>> To: CBreen; SMBrown; hgdunn@poynerspruill.com
>> Subject: Re: Twin Lakes Subdivision, Morrisville, NC
>>
>> Christina,

>>
>> I reviewed the soil sample results from sample locations L9 and
>> L10
>>
>
>
>> at AOC 21. These sample results are below Inactive Hazardous Sites
>> Branch ("Branch") soil remediation goals. Since these samples and
>> the
>>
>
>
>> samples collected on April 22, 2008 are adjacent to the contaminated
>> soil at L1 and are below detection limits, the average soil samples
>> results for AOC 21 are below Branch soil remediation goals.
>>
> Therefore,
>
>> no further soil sampling or removal are required at AOC21 and this
>> AOC
>>
>
>
>> will not be added to the Branch's Inactive Hazardous Sites Inventory.
>>
>
>
>> KB Homes and ESC Limited may proceed with the follow-up soil sampling
>> (and removal if necessary) of AOC 22.
>>
>>
>
>
>
>
>
>
>>
>> If you have any questions, please contact me at (919)508-8479.
>>
>> Sincerely,
>>
>> Keith Snavelly
>>
>>
>>
>> CBreen wrote:
>>
>>
>>> Keith,
>>>
>>> ECS advanced two soil borings, L9 and L10 as shown on the attached
>>> figure, to a depth of 3.5' and collected samples at 3' and 3.5'. The
>>> sample results are shown on the attached tables. All the samples
>>> returned below the IHSB remediation goals. Therefore, we again
>>>
> request

>
>>> relief from soil removal at AOC 21, 403 Elm Farm Place. We propose
>>> to move forward with the removal at AOC 22, 555 Abbey Fields Loop.
>>> Thank you for your consideration of this matter.
>>>
>>> Christina Breen
>>>
>>> Senior Environmental Scientist
>>>
>>>
>>>
>>> ECS Carolinas, LLP
>>>
>>> 9001 Glenwood Avenue
>>>
>>> Raleigh, NC 27617
>>>
>>> Office: 919.861.9839
>>>
>>> Fax: 919.861.9911
>>>
>>> Cell: 919.427.2601
>>>
>>> -----Original Message-----
>>> From: Keith Snavelly [mailto:Keith.Snavelly@ncmail.net]
>>> Sent: Friday, May 09, 2008 05:51 pm
>>> To: CBreen; hgdunn@poynerspruill.com; SMBrown
>>> Subject: Re: Twin Lakes Subdivision, Morrisville, NC
>>>
>>> Christina,
>>>
>>> I meant to send this email earlier, but found that I still had
>>>
>>>
>> it
>>
>>
>>> stored in my draft email. I reviewed the soil sample results from
>>>
> AOC
>
>>>
>>>
>>
>>
>>> 21. All samples were below detection limits for xylenes at a depth
>>>
> of
>
>>>
>>>
>> 2
>>
>>
>>> feet below ground surface (bgs) which shows the contamination is
>>>
>>>

>> limited
>>
>>
>>> to the vicinity of sample location L1. However, in order to show
>>> the
>>>
>
>
>>> contamination is isolated to a depth of 2 feet bgs, additional soil
>>> samples need to be collected to define the depth of contamination.
>>> Therefore, KB Home must advance two soil borings each to a depth of
>>>
>>>
>> 3.5
>>
>>
>>> feet bgs adjacent to (or as close as possible) the location of L1.
>>> A
>>>
>
>
>>> minimum of two grab soil samples shall be collected, one from each
>>>
>>>
>> soil
>>
>>
>>> boring, at a depth of 3.0 to 3.5 feet.
>>>
>>> Each soil sample shall be analyzed for Volatiles Organic
>>>
> Compounds
>
>>>
>>>
>>
>>
>>> (VOCs) by US EPA Method 8260.
>>>
>>> In addition to AOC 21, do you have the laboratory results for
>>> the
>>>
>
>
>>> soil samples collected at AOC 22?
>>>
>>> If you have any questions, I can be reached at (919) 508-8479.
>>>
>>> Sincerely,
>>>
>>>
>>> Keith Snavely, Hydrogeologist
>>> Inactive Hazardous Sites Branch
>>> Superfund Section
>>>
>>> CBreen wrote:
>>>

>>>
>>>
>>>> Mr. Snavelly,
>>>>
>>>>
>>>>
>>>> My name is Christina Breen, I am now the project manager for the
>>>>
> Twin
>
>>>>
>>>>
>>
>>
>>>> Lakes Project in Morrisville , NC . Mark Brown and I visited AOC 21
>>>>
>>>>
>> on
>>
>>
>>>>
>>>>
>>>>
>>>
>>>
>>>
>>>> April 22, 2008 and took soil samples as shown on the attached
>>>>
> figure.
>
>>>>
>>>>
>>
>>
>>>> All the samples returned back as below detection limits. We
>>>>
> therefore
>
>>>>
>>>>
>>
>>
>>>> kindly request relief from soil excavation at this property. If you
>>>> would like to discuss this matter further, please contact me at the
>>>> number below. Thank you for your consideration of this matter.
>>>>
>>>>
>>>>
>>>> Christina Breen
>>>>
>>>> Senior Environmental Scientist
>>>>
>>>>
>>>>
>>>> * ECS Carolinas , LLP *
>>>>
>>>> 9001 Glenwood Avenue

>>>>
>>>> Raleigh , NC 27617
>>>>
>>>> Office: 919.861.9839
>>>>
>>>> Fax: 919.861.9911
>>>>
>>>> Cell: 919.427.2601
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>
>

Snavely, Keith

From: Cathy Cralle Jones [cathy@attybryanbrice.com]
Sent: Thursday, June 19, 2008 10:08 AM
To: Keith Snavely
Subject: RE: FW: Knichel: Twin Lakes Report???

Thanks, Keith for you update. I sure appreciate it. Cathy

-----Original Message-----

From: Keith Snavely [mailto:Keith.Snavely@ncmail.net]
Sent: Wednesday, June 18, 2008 6:21 PM
To: Cathy Cralle Jones
Subject: Re: FW: Knichel: Twin Lakes Report???

Cathy,

The latest with the Twin Lakes Site is that KB Home conducted follow up investigations on contaminated soil at two houses. One of the houses is

AOC 21 and the second is AOC 22. The soil adjacent to and below the location and depth of the contaminated sample L1 at AOC 21 was sampled.

All samples were found to be below laboratory detection limit for volatiles including xylene. The existing sample concentration from L1 was averaged with the concentrations from the recent samples and the final soil result was found to be below the Inactive Hazardous Sites Branch cleanup goal for xylene and a no further was assigned to AOC 21.

The contaminated soil from the second house at AOC 22 is going to be removed because a second sample collected the first week of June detected xylenes at 2800 ppm near the first contaminated soil location.

This work will be conducted in the next week. I will let you know when the confirmation sample results from the exxcavation are returned from the lab.

Keith

Cathy Cralle Jones wrote:

>
> Keith -- I think when we last talked about this matter (in March) ,
> there were still a few additional items that you were going to ask be
> completed by KB Homes before issuing an NFA letter. Can you give me a

> current update on the matter?
>
>
>
> Thanks,
>
>
>
> Cathy
>

>
>
> Catherine Cralle Jones, Esq.
>
> Law Office of F. Bryan Brice, Jr.
>
> 19 W. Hargett St., Suite 600
>
> Raleigh, NC 27601
>
> (919) 754-1600
>
> Focusing on Environmental, Toxic Tort, Condemnation and Personal
> Injury Matters
>
>
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> sender to waive any privilege, including the attorney-client
> privilege, that may attach to this communication. Thank you for your
> cooperation.
>
>
>
>
>
> -----Original Message-----
>
> From: Keith Snavelly [mailto:Keith.Snavelly@ncmail.net]
>
> Sent: Wednesday, March 05, 2008 9:45 AM
>
> To: Cathy Cralle Jones
>
> Subject: Re: Knichel: Twin Lakes Report???

>
>
>
> Cathy,
>
>
>
> They finally came in on Monday March 3, but I need to review them
>
> today and tomorrow. These are large reports- (because of all the lab
>
> data- about 600 pages each, but only about 10 pages of text and 20

maps

>
> per report). You may only need the text and maps, but I need to make
>
> sure all cleanup levels were met and confirmation samples collected at
>
> all 20 homes.

>
>
> I plan on completing my review by tomorrow and get a letter
>
> (hopefully no further action) out by Friday. Call or email me on
Friday

> and I will let you know what the status is of my review.

> Keith

> Cathy Cralle Jones wrote:

> > Keith -- Did you end up getting the report as you hoped on Friday?
If

> > so, could I pick up a copy today? Thanks,

> > Cathy

> > -----Original Message-----

> > From: Cathy Cralle Jones

> > Sent: Wednesday, February 27, 2008 4:08 PM

> > To: 'Keith Snavelly'

> > Cc: Bryan Brice

> > Subject: RE: Knichel: Twin Lakes Report???

> > Thanks, Keith. Will do! Cathy

>
> >
>
> > -----Original Message-----
>
> > From: Keith Snavelly [mailto:Keith.Snavelly@ncmail.net]
>
> > Sent: Wednesday, February 27, 2008 4:03 PM
>
> > To: Cathy Cralle Jones
>
> > Subject: Re: Knichel: Twin Lakes Report???
>
> >
>
> > Cathy,
>
> >
>
> > Call me on Friday afternoon of this week to check on the reports
for
>
> >
>
> > the Twin Lakes Subdivision -20 homes. I was sent a copy of the site
>
> > investigations on these homes, but it had to be sent back for a
geologist
>
> >
>
> > seal and a final review by the senior geologist who was out with the
flu
>
> >
>
> > the last couple of weeks. My contact from KB recently left the
company
>
> > so I was also not informed of the site's status. So, I should have
this
>
> >
>
> > report and the removal/confirmation sampling report completed by KB
and
>
> > submitted to me this Friday (as they promised).
>
> >
>
> > Keith
>
> >
>
> >
>

> > Cathy Cralle Jones wrote:
>
> >
>
> >> Thanks! Cathy
>
> >>
>
> >>
>
> >> -----Original Message-----
>
> >> From: Keith Snavelly [mailto:Keith.Snavelly@ncmail.net]
>
> >> Sent: Wednesday, January 09, 2008 4:59 PM
>
> >> To: Cathy Cralle Jones
>
> >> Subject: Re: Knichel: Twin Lakes Report???

>
> >>
>
> >> Cathy,
>
> >>
>
> >> I contacted KB Homes today and also left a message with ECS
>
> >> consulting. Rosemarie Skalka from KB indicated that all the
sampling
>
> >> was completed and ECS completed their last sampling prior to the
>
> >> Christmas holiday. I hope to get something in by next week. The
>
> >>
>
> > delay
>
> >
>
> >> in sample results is the fact that ECS sampled the 20 homes in Twin
>
> >> Lakes- twice, Once during the initial assessment and then a second
>
> >>
>
> > time
>
> >
>
> >> after KB homes decided to put new irrigation lines at the homes as
>
> >>
>
> > they
>

> >
 >
 > >> did with the Knichels. I believe the 20 homes (other than the
 >
 > >>
 >
 > > Knichels)
 >
 > >
 >
 > >> were put on standard lab turnaround- taking up to 2 to 3 weeks for
 >
 > >> sample analyses. I will hear back from Mark Brown or Ryan
 Conchilla
 >
 > >>
 >
 > > and
 >
 > >
 >
 > >> let you know something tomorrow.
 >
 > >>
 >
 > >> Thanks for your patience.
 >
 > >>
 >
 > >> Keith
 >
 > >>
 >
 > >>
 >
 > >> Cathy Cralle Jones wrote:
 >
 > >>
 >
 > >>
 >
 > >>> Keith --
 >
 > >>>
 >
 > >>> Hope you had a good holiday. Re-entry is pretty daunting in our
 shop
 >
 > >>> and I imagine for you as well. Hang in there.
 >
 > >>>
 >
 > >>> What's the latest on Twin Lakes? Do we have a complete report
 yet?
 >
 > >>>
 >

> >>> Thanks, Cathy
>
> >>>
>
> >>>
>
> >>>
>
> >>> -----Original Message-----
>
> >>> From: Keith Snavely [mailto:Keith.Snavely@ncmail.net]
>
> >>> Sent: Friday, December 21, 2007 3:28 PM
>
> >>> To: Cathy Cralle Jones
>
> >>> Subject: Re: Knichel: Twin Lakes Report???
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> >>>> Catherine Cralle Jones, Esq.
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> >>>> Law Office of F. Bryan Brice, Jr.
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> >>>>
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> >>>> 19 W. Hargett St., Suite 600
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> >>>>
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> >>>> Raleigh, NC 27601
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> >>>> (919) 754-1600
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> >>>>
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Snavely, Keith

From: Keith Snavely [Keith.Snavely@ncmail.net]
Sent: Wednesday, June 18, 2008 6:21 PM
To: Cathy Cralle Jones
Subject: Re: FW: Knichel: Twin Lakes Report???

Cathy,

The latest with the Twin Lakes Site is that KB Home conducted follow up investigations on contaminated soil at two houses. One of the houses is AOC 21 and the second is AOC 22. The soil adjacent to and below the location and depth of the contaminated sample L1 at AOC 21 was sampled.

All samples were found to be below laboratory detection limit for volatiles including xylene. The existing sample concentration from L1 was averaged with the concentrations from the recent samples and the final soil result was found to be below the Inactive Hazardous Sites Branch cleanup goal for xylene and a no further was assigned to AOC 21.

The contaminated soil from the second house at AOC 22 is going to be removed because a second sample collected the first week of June detected xylenes at 2800 ppm near the first contaminated soil location.

This work will be conducted in the next week. I will let you know when the confirmation sample results from the exccavation are returned from the lab.

Keith

Cathy Cralle Jones wrote:

>
> Keith -- I think when we last talked about this matter (in March) ,
> there were still a few additional items that you were going to ask be
> completed by KB Homes before issuing an NFA letter. Can you give me a
> current update on the matter?
>
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> Thanks,
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> Cathy
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> Catherine Cralle Jones, Esq.
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> Law Office of F. Bryan Brice, Jr.
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> 19 W. Hargett St., Suite 600
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> Raleigh, NC 27601
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> Focusing on Environmental, Toxic Tort, Condemnation and Personal

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> -----Original Message-----
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> From: Keith Snavelly [mailto:Keith.Snavelly@ncmail.net]
>
> Sent: Wednesday, March 05, 2008 9:45 AM
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> To: Cathy Cralle Jones
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> Subject: Re: Knichel: Twin Lakes Report???
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> Cathy,
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> They finally came in on Monday March 3, but I need to review them
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> today and tomorrow. These are large reports- (because of all the lab
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> data- about 600 pages each, but only about 10 pages of text and 20
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> per report). You may only need the text and maps, but I need to make
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> sure all cleanup levels were met and confirmation samples collected at
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> all 20 homes.
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> I plan on completing my review by tomorrow and get a letter
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> (hopefully no further action) out by Friday. Call or email me on
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> and I will let you know what the status is of my review.
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> Cathy Cralle Jones wrote:
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> > Keith -- Did you end up getting the report as you hoped on Friday?
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> > so, could I pick up a copy today? Thanks,
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> > Cathy
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> > -----Original Message-----
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> > From: Cathy Cralle Jones
>
> > Sent: Wednesday, February 27, 2008 4:08 PM
>
> > To: 'Keith Snavelly'
>
> > Cc: Bryan Brice
>
> > Subject: RE: Knichel: Twin Lakes Report???

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> > Thanks, Keith. Will do! Cathy
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> > Sent: Wednesday, February 27, 2008 4:03 PM
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> > To: Cathy Cralle Jones
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> > investigations on these homes, but it had to be sent back for a
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> > seal and a final review by the senior geologist who was out with the
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> > the last couple of weeks. My contact from KB recently left the
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> > so I was also not informed of the site's status. So, I should have
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> >> Sent: Wednesday, January 09, 2008 4:59 PM

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Snavely, Keith

From: Cathy Cralle Jones [cathy@attybryanbrice.com]
Sent: Wednesday, June 18, 2008 11:59 AM
To: Keith Snavely
Cc: Bryan Brice
Subject: FW: Knichel: Twin Lakes Report???

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Catherine Cralle Jones, Esq.
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19 W. Hargett St., Suite 600
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(919) 754-1600
Focusing on Environmental, Toxic Tort, Condemnation and Personal Injury Matters

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Snavely, Keith

From: Keith Snavely [Keith.Snavely@ncmail.net]
Sent: Wednesday, June 18, 2008 10:21 AM
To: SMBrown
Subject: Re: Twin Lakes Subdivision, Morrisville, NC

Mark,

I hope things go well with the excavation. Just keep me posted.

Keith

SMBrown wrote:

> Several things have happened in the last few days.
> 1) Christina has also left ECS, possibly to go to work with Ryan.
> 2) One of the samples collected on June 7 contained elevated levels
> (2800 ppm) of xylene.
> 3) KB is in the process of notifying the homeowners that we have
> tentatively scheduled excavation to take place on June 25th. We
> anticipate one truckload of soil with inert concrete debris.
> 4) I will personally lead this excavation so we can excavate and
> backfill in one day.
>
> Please contact me if you have any questions or would like to come
> observe our operation.
>
> Mark Brown, LG, PG, RSM
> Principal Geologist
> Environmental Services Department Manager
> 9001 Glenwood Avenue
> Raleigh, NC 27617
>
> 919.861.9910 (Switchboard)
> 919.861.9861 (Direct)
> 919.861.9911 (Fax)
> 919.291.9200 (Cell)
>
> www.ecslimited.com
>
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> -Frank A. Clark
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> This message, including any attachment hereto, is confidential and
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> -----Original Message-----
> From: Keith Snavely [mailto:Keith.Snavely@ncmail.net]

> Sent: Tuesday, June 17, 2008 4:41 PM
> To: CBreen
> Subject: Re: Twin Lakes Subdivision, Morrisville, NC
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> Christina:
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>> Senior Environmental Scientist
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>> Raleigh, NC 27617
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>> Cell: 919.427.2601
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>> -----Original Message-----
>> From: Keith Snavelly [mailto:Keith.Snavelly@ncmail.net]
>> Sent: Monday, June 02, 2008 11:49 am
>> To: CBreen; SMBrown; hgdunn@poynerspruill.com
>> Subject: Re: Twin Lakes Subdivision, Morrisville, NC
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>> soil at L1 and are below detection limits, the average soil samples
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>> will not be added to the Branch's Inactive Hazardous Sites Inventory.
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>> KB Homes and ESC Limited may proceed with the follow-up soil sampling
>> (and removal if necessary) of AOC 22.
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>> If you have any questions, please contact me at (919)508-8479.
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>> Sincerely,
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>>> relief from soil removal at AOC 21, 403 Elm Farm Place. We propose
>>> to move forward with the removal at AOC 22, 555 Abbey Fields Loop.
>>> Thank you for your consideration of this matter.
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>>> From: Keith Snavelly [mailto:Keith.Snavelly@ncmail.net]
>>> Sent: Friday, May 09, 2008 05:51 pm
>>> To: CBreen; hgdunn@poynerspruill.com; SMBrown
>>> Subject: Re: Twin Lakes Subdivision, Morrisville, NC
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Snavely, Keith

From: SMBrown [SMBrown@ecslimited.com]
Sent: Tuesday, June 17, 2008 4:51 PM
To: Keith Snavely
Subject: RE: Twin Lakes Subdivision, Morrisville, NC

Several things have happened in the last few days.

- 1) Christina has also left ECS, possibly to go to work with Ryan.
- 2) One of the samples collected on June 7 contained elevated levels (2800 ppm) of xylene.
- 3) KB is in the process of notifying the homeowners that we have tentatively scheduled excavation to take place on June 25th. We anticipate one truckload of soil with inert concrete debris.
- 4) I will personally lead this excavation so we can excavate and backfill in one day.

Please contact me if you have any questions or would like to come observe our operation.

Mark Brown, LG, PG, RSM
Principal Geologist
Environmental Services Department Manager
9001 Glenwood Avenue
Raleigh, NC 27617

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919.861.9861 (Direct)
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Therefore,
> no further soil sampling or removal are required at AOC21 and this AOC

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Snavely, Keith

From: CBreen [CBreen@ecslimited.com]
Sent: Tuesday, June 03, 2008 8:47 AM
To: Keith Snavely; SMBrown; <hgdunn@poynerspruill.com>
Cc: <tcope@kbhome.com>; Christensen, Matt; CDionne
Subject: RE: Twin Lakes Subdivision, Morrisville, NC

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Senior Environmental Scientist

ECS Carolinas, LLP

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> To: CBreen; hgdunn@poynerspruill.com; SMBrown
> Subject: Re: Twin Lakes Subdivision, Morrisville, NC
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> Christina,
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> it stored in my draft email. I reviewed the soil sample results from
> AOC 21. All samples were below detection limits for xylenes at a
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> feet below ground surface (bgs) which shows the contamination is
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> to the vicinity of sample location L1. However, in order to show the
> contamination is isolated to a depth of 2 feet bgs, additional soil
> samples need to be collected to define the depth of contamination.
> Therefore, KB Home must advance two soil borings each to a depth of
> 3.5 feet bgs adjacent to (or as close as possible) the location of L1.
> A minimum of two grab soil samples shall be collected, one from each
> soil boring, at a depth of 3.0 to 3.5 feet.
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> Each soil sample shall be analyzed for Volatiles Organic Compounds
> (VOCs) by US EPA Method 8260.
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> In addition to AOC 21, do you have the laboratory results for the
> soil samples collected at AOC 22?
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> If you have any questions, I can be reached at (919) 508-8479.
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>> Cell: 919.427.2601
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Snavely, Keith

From: CBreen [CBreen@ecslimited.com]
Sent: Thursday, May 22, 2008 3:26 PM
To: Keith Snavely; <hgdunn@poynerspruill.com>; SMBrown
Cc: <tcope@kbhome.com>; Christensen, Matt
Subject: RE: Twin Lakes Subdivision, Morrisville, NC
Attachments: Sample Results Round 2.pdf

Keith,

ECS advanced two soil borings, L9 and L10 as shown on the attached figure, to a depth of 3.5' and collected samples at 3' and 3.5'. The sample results are shown on the attached tables. All the samples returned below the IHSB remediation goals. Therefore, we again request relief from soil removal at AOC 21, 403 Elm Farm Place. We propose to move forward with the removal at AOC 22, 555 Abbey Fields Loop. Thank you for your consideration of this matter.

Christina Breen

Senior Environmental Scientist

ECS Carolinas, LLP

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Raleigh, NC 27617

Office: 919.861.9839

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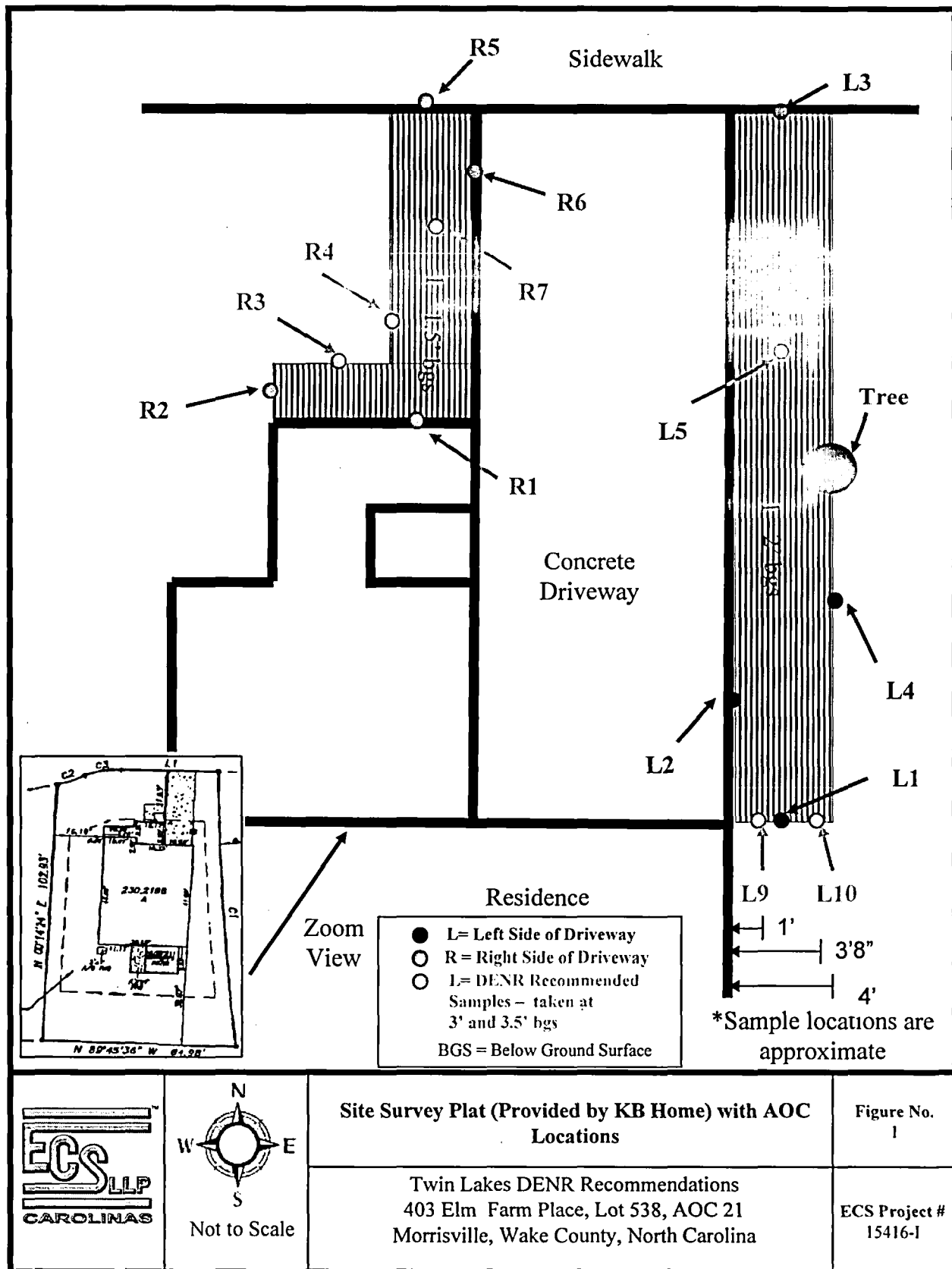


TABLE 1
SUMMARY OF FIELD PID READINGS

Date: May 22, 2008

Project Name: Twin Lakes DENR Recommendations

ECS Job Number: 06.15416-I

AOC	Sample ID	Sample Depth (ft)	PID (ppm)*
21	L9a	3	5.6
	L9b	3.5	1.6
	L10a	3	6.7
	L10b	3.5	65.9
	L11**	n/a	n/a

*Volatile Organic Compounds (VOC) screened in the field using a Foxboro Model 1000B toxic vapor analyzer (TVA). VOC concentrations listed above are not laboratory confirmed and should only be used as a guide and not as the true concentrations of VOCs in the soils collected from the represented sample.

**L11 was blind duplicate of AOC 21 L10b

Date: May 22, 2008
Project Name: Twin Lakes DENR Recommendations
ECS Job Number: 06.15416-I

Bold indicates results above the Soil Remediation Goals
Gray shaded box indicates results above Groundwater Standards (times 20)
 ppm = parts per million
 BDL = Below Quantitation Limit
 R = Right side of Driveway
 L = Left side of Driveway
 S = Devils Strip near Sidewalk
 NA = Not Analyzed
 NE = Not Established, therefore a detection is considered an exceedance
 Sample results and regulatory limits are presented in parts per million (ppm)

¹ The Groundwater Standards promulgated in 15A NCAC 2L are typically presented in micrograms per liter (ug/L). The Groundwater Standards have been converted into milligrams/liter (mg/L) for comparison.

² As a comparison against Exception 2 listed in Section 4.1.1.2 of the IHSP Guidelines for Assessment and Cleanup, August 2007, the Groundwater Standards values have been converted to mg/L, and multiplied 20 times.

Snavely, Keith

From: Keith Snavely [Keith.Snavely@ncmail.net]
Sent: Monday, May 12, 2008 4:02 PM
To: CBreen
Subject: Re: Twin Lakes Subdivision, Morrisville, NC

Thanks so much.

Keith

CBreen wrote:

> We were waiting to see if we need to do any removal at AOC 21 before
> beginning removal at AOC 22, so we could do all the removal at the
> same time. We will rush the results for this week's samples at AOC 21,
> so hopefully we can make a final determination regarding removal
> there, and we can begin the removal work by next week.

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> -----Original Message-----

> From: Keith Snavely [mailto:Keith.Snavely@ncmail.net]

> Sent: Monday, May 12, 2008 03:42 pm

> To: CBreen

> Subject: Re: Twin Lakes Subdivision, Morrisville, NC

> That sounds good. Do you have any information when KB Home will start
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> CBreen wrote:

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From: CBreen [CBreen@ecslimited.com]
Sent: Monday, May 12, 2008 3:56 PM
To: Keith Snavely; SMBrown; Christensen, Matt
Cc: <tcope@kbhome.com>; <hgdunn@poynerspruill.com>
Subject: RE: Twin Lakes Subdivision, Morrisville, NC

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Snavely, Keith

From: CBreen [CBreen@ecslimited.com]
Sent: Thursday, May 01, 2008 5:08 PM
To: <hgdunn@poynerspruill.com>; <keith.snavely@ncmail.net>; mchristenson@kbhome.com;
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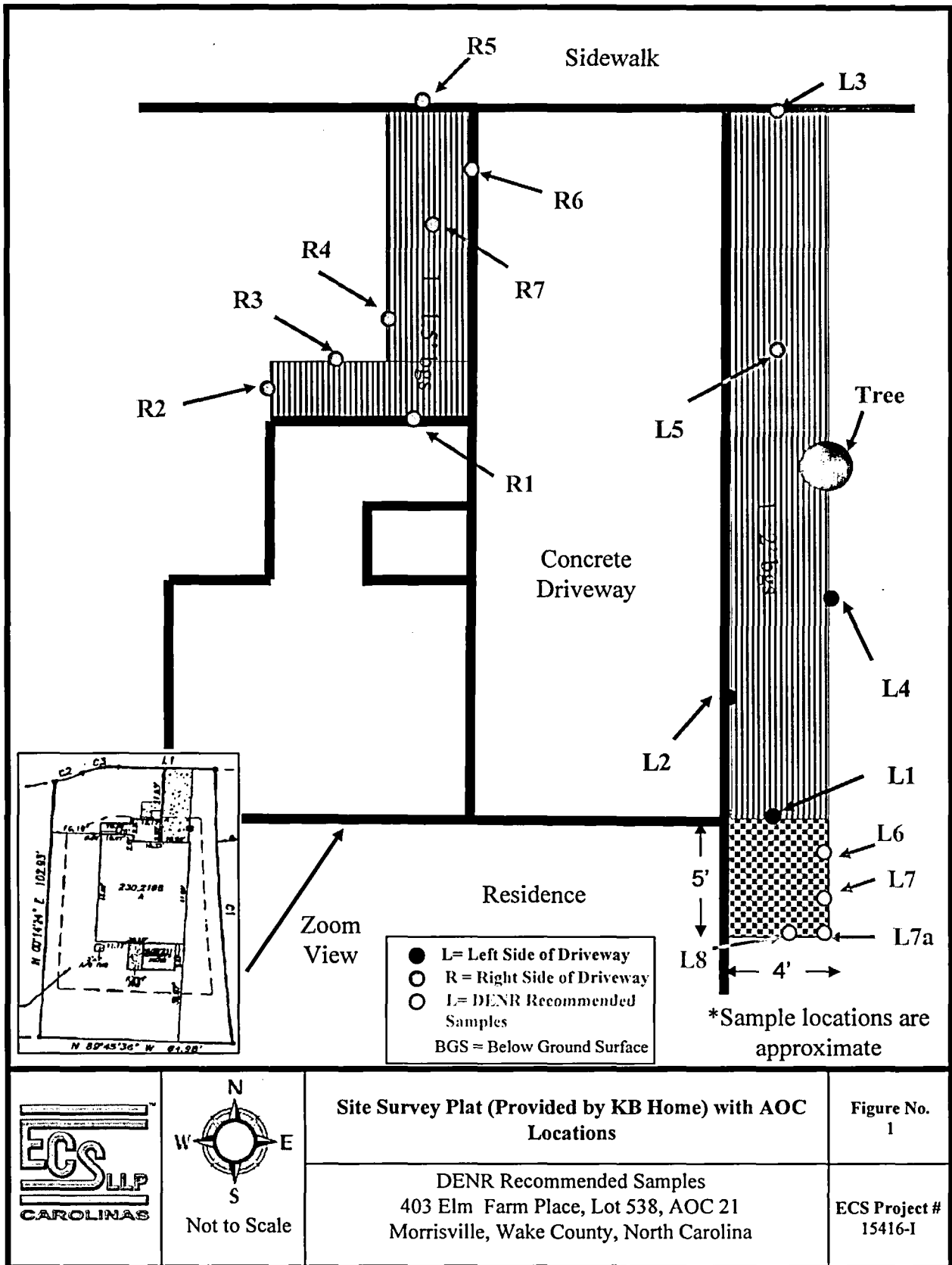


TABLE 1
SUMMARY OF FIELD PID READINGS

Date: May 1, 2008
Project Name: DENR Recommended Samples
ECS Job Number: 06.15416-I

AOC	Sample ID	Sample Depth (ft)	PID (ppm)*
21	L6	6"	0.8
		1'	0.9
		2'	1.3
	L7	6"	1.7
	L7a	6"	1.7
		1'	1.8
		2'	1.8
	L8	6"	0.9
		1'	1.5
		2'	1

*Volatile Organic Compounds (VOC) screened in the field using a Foxboro Model 1000B toxic vapor analyzer (TVA). VOC concentrations listed above are not laboratory confirmed and should only be used as a guide and not as the true concentrations of VOCs in the soils collected from the represented sample.

TABLE 2
SUMMARY OF SOIL SAMPLE RESULTS

Date: May 1, 2008

Project Name: Twin Lakes DENR Recommendations

ECS Job Number: 06.15416-I

Analytical Method				8260B
Sample ID	Lot No.	Contaminant of Concern		All Parameters
		Date Collected	Approximate Sample Depth (ft)	
AOC 21 L6	538	04/22/2008	2	BDL
AOC 21 L7a			1	BDL
AOC 21 L8			1	BDL
AOC 21 L9			1	BDL

ppm = parts per million

BDL = Below Quantitation Limit

L = Left side of Driveway

Sample results and regulatory limits are presented in parts per million (ppm)

Snavely, Keith

From: Keith Snavely [Keith.Snavely@ncmail.net]
Sent: Wednesday, April 16, 2008 5:21 PM
To: Scott Ross
Subject: Re: [Fwd: RE: Edgar Padron Request for Copy of file]

Scott,

I know what she needs. I have the file up in my office. This site was the Twin Lakes subdivision site- emergency action and I have never given it a number. It turned out to be a largersite than I anticipated. I will bring down the file tomorrow morning. It is a large three ring binder report that she can review and copy.

Keith

Scott Ross wrote:

> Keith --
>
> Not sure what she means by Division of Waste Mgmt. Do you have this
> file? Is it in the AG's Conference Room?
>
> Thanks,
> Scott
>
>
> ----- Original Message -----
> Return-Path: <tae@lbdelaw.com>
> Received: from relay3.ncmail.net (149.168.220.200) by ms01.ncmail.net
> (7.3.120) id 4801FA9C0004CB52 for Scott.Ross@ncmail.net; Wed, 16 Apr
> 2008 16:05:09 -0400
> Received: from relay3.ncmail.net (127.0.0.1) by relay3.ncmail.net
> (7.3.118) id 4780ADBC008A8D4A for Scott.Ross@ncmail.net; Wed, 16 Apr
> 2008 16:05:09 -0400
> Received: from smtp7.state.nc.us (149.168.220.242) by
> relay3.ncmail.net (7.3.118) id 4780ADBA00807BB1 for
> Scott.Ross@ncmail.net; Wed, 16 Apr 2008 16:05:09 -0400
> Received: from cdptpa-omtalb.mail.rr.com (cdptpa-omtalb.mail.rr.com
> [75.180.132.120]) by smtp7.state.nc.us (8.14.2/8.14.2/DRH) with ESMTP
> id m3GK53PL027572 for <Scott.Ross@ncmail.net>; Wed, 16 Apr 2008
> 16:05:03 -0400 (EDT)
> Received: from mail2.lbdelaw.com ([70.61.82.186]) by
> cdptpa-omta02.mail.rr.com with ESMTP id
> <20080416200502.QUOG1070.cdptpa-omta02.mail.rr.com@mail2.lbdelaw.com>
> for <Scott.Ross@ncmail.net>; Wed, 16 Apr 2008 20:05:02 +0000
> MIME-Version: 1.0
> Content-Type: multipart/alternative;
> boundary="-----_NextPart_001_01C8A005.68C80EE2"
> Content-Class: urn:content-classes:message
> X-MimeOLE: Produced By Microsoft Exchange V6.0.6619.12
> Subject: RE: Edgar Padron Request for Copy of file
> Date: Wed, 16 Apr 2008 16:04:07 -0500
> Message-ID:
> <82142A505F7C2445A2B1E82E46788CBFBC0036@lbdeserver.lbdelaw.com>
> X-MS-Has-Attach:

> X-MS-TNEF-Correlator:
> Thread-Topic: Edgar Padron Request for Copy of file
> Thread-Index: AcigBJWyS+dHPcUARPCpu+c5AAuJyAAADv3g
> From: Talitha A. Ekis <tae@lbdelaw.com>
> To: Scott Ross <Scott.Ross@ncmail.net>
> X-Spam-Score: 0.001 HTML_MESSAGE
> X-Spam-Status: Yes, hits=0.001 required=6
> X-Scanned-By: MIMEDefang 2.64 on 149.168.220.242
>
>
>
> I'm not sure if we were experiencing problems or not but it is very
> possible as we have had problems with the phones before. Sorry about
> that. Keith did locate the file after a few back and forth
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> file was with the Department of Waste Management. Once you have
> located the file, please let me know and I will be glad to schedule a
> time to come in and review/copy it.
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> I appreciate you looking into this for me and look forward to hearing
> back from you. If there is anything that I help with as far as
> locating what division the file is with, please let me know. Thank you!
>
> Talitha A. Ekis, Legal Assistant/Interpreter
>
> Lucas, Denning & Ellerbe, P.A.
>
> P.O. Box 309, Selma, NC 27576
>
> Phone: (919) 965-8184 Fax: (919) 965-3303
>
> tae@lbdelaw.com <mailto:tae@lbdelaw.com>
>
> -----Original Message-----
> *From:* Scott Ross [mailto:Scott.Ross@ncmail.net]
> *Sent:* Wednesday, April 16, 2008 2:57 PM
> *To:* Talitha A. Ekis
> *Subject:* Re: Edgar Padron Request for Copy of file
>
> Talitha --
>
> Were you experiencing problems with your telephone lines yesterday? I
> tried to call you but kept getting a message saying the line had been
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> files were sent to us. Once the file material has been located, you
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> your request, I am sending this e-mail with a detailed description of
> what our office needs. Mr. Padron lives at 646 Piper Stream Cir. Cary,
> NC which is a home he got through KB Home. He was exposed to the
> chemical Xylene when some work was done on his driveway. Tests were
> done at and in his home and the surrounding property following after
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> well as dates that the tests were done and the locations (outside on
> the property or in the actual house).
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> information that you need. Thank you for your assistance.
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> Talitha A. Ekis, Legal Assistant/Interpreter
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> P.O. Box 309, Selma, NC 27576
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> Phone: (919) 965-8184 Fax: (919) 965-3303
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> tae@lbdelaw.com <mailto:tae@lbdelaw.com>
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> He that lives in hope danceth without musick. -- George Herbert
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Snavely, Keith

From: Scott Ross [Scott.Ross@ncmail.net]
Sent: Wednesday, April 16, 2008 4:07 PM
To: Keith Snavely
Subject: [Fwd: RE: Edgar Padron Request for Copy of file]
Attachments: Scott.Ross.vcf

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----- Original Message -----

Return-Path:<tae@lbdelaw.com>

Received:from relay3.ncmail.net (149.168.220.200) by ms01.ncmail.net (7.3.120) id 4801FA9C0004CB52 for Scott.Ross@ncmail.net; Wed, 16 Apr 2008 16:05:09 -0400

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Received:from mail2.lbdelaw.com ([70.61.82.186]) by cdptpa-omta02.mail.rr.com with ESMTP id <20080416200502.QUOG1070.cdptpa-omta02.mail.rr.com@mail2.lbdelaw.com> for <Scott.Ross@ncmail.net>; Wed, 16 Apr 2008 20:05:02 +0000

MIME-Version:1.0

Content-Type:multipart/alternative; boundary="-----=_NextPart_001_01C8A005.68C80EE2"

Content-Class:urn:content-classes:message

X-MimeOLE:Produced By Microsoft Exchange V6.0.6619.12

Subject:RE: Edgar Padron Request for Copy of file

Date:Wed, 16 Apr 2008 16:04:07 -0500

Message-ID:<82142A505F7C2445A2B1E82E46788CBFBC0036@lbdeserver.lbdelaw.com>

X-MS-Has-Attach:

X-MS-TNEF-Correlator:

Thread-Topic:Edgar Padron Request for Copy of file

Thread-Index:AcigBJWyS+dHPcUARPCpu+c5AAuJyAAADv3g

From:Talitha A. Ekis <tae@lbdelaw.com>

To:Scott Ross <Scott.Ross@ncmail.net>

X-Spam-Score:0.001 HTML MESSAGE

X-Spam-Status:Yes, hits=0.001 required=6

X-Scanned-By:MIMEDefang 2.64 on 149.168.220.242

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Lucas, Denning & Ellerbe, P.A.

P.O. Box 309, Selma, NC 27576

Phone: (919) 965-8184 Fax: (919) 965-3303

tae@lbdelaw.com

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Sent: Wednesday, April 16, 2008 2:57 PM

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Subject: Re: Edgar Padron Request for Copy of file

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tae@lbdelaw.com

--

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--

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Snavely, Keith

From: Scott Ross [Scott.Ross@ncmail.net]
Sent: Wednesday, April 16, 2008 3:57 PM
To: Talitha A. Ekis
Subject: Re: Edgar Padron Request for Copy of file
Attachments: Scott.Ross.vcf

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Phone: (919) 965-8184 Fax: (919) 965-3303

tae@lbdelaw.com

--

He that lives in hope danceth without musick. -- George Herbert

Snavely, Keith

From: RConchilla [RConchilla@ecslimited.com]
Sent: Monday, March 17, 2008 11:27 AM
To: Keith Snavely
Subject: Updated Table 4, ECS Project 15416-G, Phase I+II RI in Morrisville, NC
Attachments: 15416-G_TABLE4-revised_TripBlanks.pdf

Keith,

Attached please find the revised Table 4 which contains your request for the correction of ppm to ppb in the Trip Blank data. I'm working on the requested Work Plan for the assessment at the two residences identified in your letter report.

Talk to you soon,

Ryan J. Conchilla

Senior Environmental Scientist

ECS Carolinas, LLP

9001 Glenwood Avenue

Raleigh, NC 27617-7505

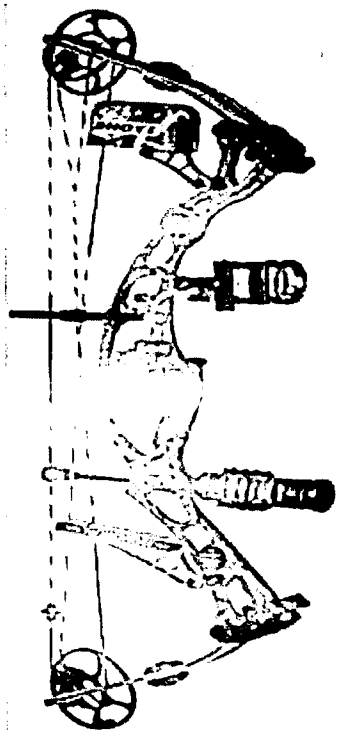
(919) 861-9862 (direct voice)

(919) 291-5744 (mobile)

(919) 861-9910 (office)

(919) 861-9911 (office fax)

email: rconchilla@ecslimited.com



The ECS Group of Companies
ENR #62 Pure Design Firm
ENR #96 Top Design Firm
ENR #177 Top Environmental Firm

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Date: February 27, 2008
Project Name: PHASE II REMEDIATION
ECS Job Number: 06.15416-G

TABLE 4
SUMMARY OF TRIP BLANK RESULTS

Analytical Method		8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B
ESC Report	Date Report Generated	Acetone	Benzene	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Ethylbenzene	Isopropylbenzene	p-Isopropyltoluene	2-Butanone (Methyl Ethyl Ketone)	Naphthalene	n-Propylbenzene	Toluene	1,1,2-Trichloro-1,2,2-trifluoro	1,2,3-Trichloropropane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Xylene
L322082	12/12/2007	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
L322388	12/05/2007	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
L322648	12/08/2007	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
L322901	12/19/2007	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
L323606	12/27/2007	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
L323787	12/27/2007	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
L324131	12/27/2007	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
L323357	12/28/2007	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
L324261	12/28/2007	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Inactive Hazardous Sites Branch Soil Remediation Goals (RGs)		2800	0.64	NE	NE	NE	380	NE	NE	NE	NE	NE	132	NE	0.034	NE	NE	54
NCAC 2L Groundwater Standards (converted to mg/L) ¹		0.7	0.001	0.07	0.07	0.07	0.55	0.07	NE	4.2	0.021	0.07	1	NE	NE	0.35	0.35	0.53
Groundwater Standards (times 20) ²		14	0.02	1.4	1.4	1.4	11	1.4	NE	84	0.42	1.4	20	NE	NE	7	7	10.6

Bold indicates results above the Soil Remediation Goals. Trip Blank results are reported in ppb.

Gray shaded box indicates results above Groundwater Standards (times 20)

ppb = parts per billion

BDL = Below Quantitation Limit

R = Right side of Driveway

L = Left side of Driveway

S = Devils Strip near Sidewalk

NA = Not Analyzed

NE= Not Established, therefore a detection is considered an exceedance

Sample results and regulatory limits are presented in parts per million (ppm)

¹ The Groundwater Standards promulgated in 15A NCAC 2L are typically presented in micrograms per liter (ug/L). The Groundwater Standards have been converted into milligrams/liter (mg/L) for comparison.

² As a comparison against Exception 2 listed in Section 4.1.1.2 of the IHSP Guidelines for Assessment and Cleanup, August 2007, the Groundwater Standards values have been converted to mg/L, and multiplied 20 times.

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L324131	12/27/2007	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
L323357	12/28/2007	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
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Snavely, Keith

From: Scott Ross [Scott.Ross@ncmail.net]
Sent: Monday, March 10, 2008 4:49 PM
To: Keith Snavely
Subject: Re: Fwd: RE: Knichel: Twin Lakes Report???
Attachments: Scott.Ross.vcf

You mean I'm sitting on them now?? ;)

I assume you mean they **will** be on my chair.

Thanks, Keith.
-- Scott

Keith Snavely wrote:

Scott

I will bring all the documents down for the 223 Rope Walk Court Site and the Twin Lakes Subdivision sites (20 homes). I am not going to assign an NCD number for the Twin Lakes Subdivision sites since the cleanup party will be excavating soils and be done with the sites very soon. I will pick up the files after Cathy's review tomorrow. The files are in your chair.

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Snavely, Keith

From: Keith Snavely [Keith.Snavely@ncmail.net]
Sent: Monday, March 10, 2008 4:41 PM
To: Scott Ross
Subject: Re: Fwd: RE: Knichel: Twin Lakes Report???

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Keith

Scott Ross wrote:

> Cathy will be in tomorrow (Tuesday, 10 March) to look at the report.
>
> Thanks, Keith.
> -- Scott
>
>
>

Snavely, Keith

From: Scott Ross [Scott.Ross@ncmail.net]
Sent: Monday, March 10, 2008 2:39 PM
To: Keith Snavely
Subject: Fwd: RE: Knicel: Twin Lakes Report???
Attachments: Scott.Ross.vcf

Cathy will be in tomorrow (Tuesday, 10 March) to look at the report.

Thanks, Keith.
-- Scott

--
He that lives in hope danceth without musick. -- George Herbert

Snavely, Keith

From: Cathy Cralle Jones [cathy@attybryanbrice.com]
Sent: Monday, March 10, 2008 11:19 AM
To: Scott Ross; Keith Snavely
Subject: RE: Knichel: Twin Lakes Report???

Scott -- Yes -- I think Keith probably still has it in his office --- its part of the Knichel matter that I got copies of earlier this year.

I was hoping for the 9:00 hour because then I don't have to come downtown and then go back to your office. Can I do the earlier time slot on Wednesday or could I get a late afternoon slot tomorrow or Wednesday?

Thanks, Cathy

-----Original Message-----

From: Scott Ross [mailto:Scott.Ross@icmail.net]
Sent: Monday, March 10, 2008 10:41 AM
To: Cathy Cralle Jones
Subject: Re: Knichel: Twin Lakes Report???

Cathy --

I can see you at 10.00 tomorrow. Does Keith have this information? I am not familiar with this site.

-- Scott

Cathy Cralle Jones wrote:

>Scott -- Can I come by tomorrow (Tues) around 9:00 am to review the
>reports? Thanks, Cathy

>
>

--

He that lives in hope danceth without musick. -- George Herbert

Snavely, Keith

From: Cathy Cralle Jones [cathy@attybryanbrice.com]
Sent: Monday, March 10, 2008 10:47 AM
To: Keith Snavely; <SCOTT.ROSS@NCMAIL.NET>
Subject: RE: Knichel: Twin Lakes Report???

Scott -- Can I come by tomorrow (Tues) around 9:00 am to review the reports? Thanks, Cathy

-----Original Message-----

From: Keith Snavely [mailto:Keith.Snavely@ncmail.net]
Sent: Friday, March 07, 2008 3:06 PM
To: Cathy Cralle Jones
Subject: Re: Knichel: Twin Lakes Report???

Cathy,

I have completed my review of the Phase I and Phase II Remedial Investigation reports at the Twin Lakes Subdivision. I still have comment to make on the reports so they may not be final.

If you want to review them, check with Scott Ross in our file room at (919) 508-8745 to set up a review time.

Keith

Cathy Cralle Jones wrote:

> Keith -- If there was anyway that I could take a look at the report
> before you send your final letter, I sure would appreciate it. Could
> I

> possibly get a copy of the narrative and the maps before you finalize
> everything?

>
> Thanks, Cathy

>
> -----Original Message-----
> **From:** Keith Snavely [mailto:Keith.Snavely@ncmail.net]
> **Sent:** Wednesday, March 05, 2008 9:45 AM
> **To:** Cathy Cralle Jones
> **Subject:** Re: Knichel: Twin Lakes Report???

>
> Cathy,

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> They finally came in on Monday March 3, but I need to review them
> today and tomorrow. These are large reports- (because of all the lab
> data- about 600 pages each, but only about 10 pages of text and 20
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>
> per report). You may only need the text and maps, but I need to make
> sure all cleanup levels were met and confirmation samples collected at

> all 20 homes.

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> I plan on completing my review by tomorrow and get a letter

> (hopefully no further action) out by Friday. Call or email me on Friday

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> and I will let you know what the status is of my review.

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>

> Keith

>

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> Cathy Cralle Jones wrote:

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>> Keith -- Did you end up getting the report as you hoped on Friday?

If

>> so, could I pick up a copy today? Thanks,

>>

>> Cathy

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>> -----Original Message-----

>> From: Cathy Cralle Jones

>> Sent: Wednesday, February 27, 2008 4:03 PM

>> To: 'Keith Snavelly'

>> Cc: Bryan Brice

>> Subject: RE: Knichel: Twin Lakes Report???

>>

>> Thanks, Keith. Will do! Cathy

>>

>>

>> -----Original Message-----

>> From: Keith Snavelly [mailto:Keith.Snavely@ncmail.net]

>> Sent: Wednesday, February 27, 2008 4:03 PM

>> To: Cathy Cralle Jones

>> Subject: Re: Knichel: Twin Lakes Report???

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>> Call me on Friday afternoon of this week to check on the reports

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>> investigations on these homes, but it had to be sent back for a

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> geologist

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>> seal and a final review by the senior geologist who was out with the

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>> Cathy Cralle Jones wrote:
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>>> -----Original Message-----
>>> From: Keith Snavely [mailto:Keith.Snavely@ncmail.net]
>>> Sent: Wednesday, January 09, 2008 4:59 PM
>>> To: Cathy Cralle Jones
>>> Subject: Re: Knichel: Twin Lakes Report???

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 >>>> Sent: Friday, December 21, 2007 3:28 PM
 >>>> To: Cathy Cralle Jones
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>>>> 19 W. Hargett St., Suite 600
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>>>> Raleigh, NC 27601
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>>>> (919) 754-1600
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>>>> otherwise legally exempt from disclosure. If you are not the
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>>>> to waive any privilege, including the attorney-client privilege,
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>>>> may attach to this communication. Thank you for your cooperation.
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Snavely, Keith

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>> From: Cathy Cralle Jones
>> Sent: Wednesday, February 27, 2008 4:08 PM
>> To: 'Keith Snavelly'
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>> Subject: RE: Knichel: Twin Lakes Report???

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[illegible]

Snavely, Keith

From: Keith Snavely [Keith.Snavely@ncmail.net]
Sent: Thursday, March 06, 2008 10:42 AM
To: Cathy Cralle Jones
Subject: Re: Knichel: Twin Lakes Report???

Cathy,

If you want to review the Phase I and Phase II Remedial Investigation Reports, I will contact you when I have completed my review before I finalize my letter. However, you will need to contact Scott Ross to set up a review time and copy what you need from the reports. I will complete my review by tomorrow. Therefore, I would try to set something up on Monday March 10, Tuesday 11th or Wednesday 12th. I underestimated the amount of pages you may need to copy. The text on both reports is not long- may be 8 to 10 pages each, but there are 20 or more figures and several important tables of data for each report. It will take you awhile to copy since the 11x17 figures are are bound.

Keith

Cathy Cralle Jones wrote:

> Keith -- If there was anyway that I could take a look at the report
> before you send your final letter, I sure would appreciate it. Could
> I possibly get a copy of the narrative and the maps before you
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>> From: Keith Snavelly [mailto:Keith.Snavelly@ncmail.net]
>> Sent: Wednesday, January 09, 2008 4:59 PM
>> To: Cathy Cralle Jones
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Snavely, Keith

From: Keith Snavely [Keith.Snavely@ncmail.net]
Sent: Wednesday, March 05, 2008 9:45 AM
To: Cathy Cralle Jones
Subject: Re: Knichel: Twin Lakes Report???

Cathy,

They finally came in on Monday March 3, but I need to review them today and tomorrow. These are large reports- (because of all the lab data- about 600 pages each, but only about 10 pages of text and 20 maps per report). You may only need the text and maps, but I need to make sure all cleanup levels were met and confirmation samples collected at all 20 homes.

I plan on completing my review by tomorrow and get a letter (hopefully no further action) out by Friday. Call or email me on Friday and I will let you know what the status is of my review.

Keith

Cathy Cralle Jones wrote:

> Keith -- Did you end up getting the report as you hoped on Friday? If
> so, could I pick up a copy today? Thanks,

>
> Cathy
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> -----Original Message-----

> From: Cathy Cralle Jones
> Sent: Wednesday, February 27, 2008 4:08 PM
> To: 'Keith Snavely'
> Cc: Bryan Brice
> Subject: RE: Knichel: Twin Lakes Report???

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> Thanks, Keith. Will do! Cathy
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Snavely, Keith

From: Cathy Cralle Jones [cathy@attybryanbrice.com]
Sent: Wednesday, March 05, 2008 9:38 AM
To: Keith Snavely
Cc: Bryan Brice
Subject: RE: Knichel: Twin Lakes Report???

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Snavely, Keith

From: RConchilla [RConchilla@ecslimited.com]
Sent: Monday, March 03, 2008 10:09 AM
To: Keith Snavely
Subject: Twin Lakes Report 15416-G
Attachments: 15416-G_Phase II_Final_reduced.pdf

Keith,

Good morning. Here is the second report for the Twin Lakes site.

Ryan J. Conchilla
Senior Environmental Scientist
Phase I Team Leader
ECS Carolinas, LLP
9001 Glenwood Avenue
Raleigh, NC 27617-7505
(919) 861-9862 (direct voice)
(919) 291-5744 (mobile)
(919) 861-9910 (office)
(919) 861-9911 (office fax)
email: rconchilla@ecslimited.com

The ECS Group of Companies
ENR #62 Pure Design Firm
ENR #96 Top Design Firm
ENR #177 Top Environmental Firm

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-----Original Message-----

From: Keith Snavely [mailto:Keith.Snavely@ncmail.net]
Sent: Tuesday, February 26, 2008 05:38 pm
To: RConchilla
Subject: Re: Twin Lakes Report 15416-C

Thanks so much for the report. I will take a look at hopefully by the end of the week and get a reply out to KB and cc you and Mark Brown a copy by next week. I spoke to Rosemary Skalka before you recent email and she provided the names of the staff that are working on the Project. I will be in touch with them with our letter.

Keith

RConchilla wrote:

> Attached please find the Phase I Remedial Investigation Report for
> Twenty Homes located in the Twin Lakes Subdivision, Morrisville, NC.
>

> The second report (15416-G), due to its size, will be sent to you via
> our ECS, FTP site.
>
> A hard copy of each report is being processed, when complete I'll
> contact you and deliver them in person.
>
> Talk to you soon,
>
>
>
>
> Ryan J. Conchilla
> Senior Environmental Scientist
> Phase I Team Leader
> ECS Carolinas, LLP
> 9001 Glenwood Avenue
> Raleigh, NC 27617-7505
> (919) 861-9862 (direct voice)
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> -----Original Message-----
> From: Keith Snavely [mailto:Keith.Snavely@ncmail.net]
> Sent: Friday, February 22, 2008 02:21 pm
> To: SMBrown; RConchilla; Skalka, Rosemary
> Subject: [Fwd: Twin Lake Report]
>
> Rosemary, Mark and Ryan:
>
> Can you give me an update on the status of the Twin Lakes
> Subdivision assesement on the 20 homes that followed the
investigation
> of the xylene spill at 223 Rope Walk Court in Morrisville, NC.
>
> Thanks,
>
> Keith
>
>
>
>
> ----- Original Message -----
> Subject: Twin Lake Report
> Date: Mon, 11 Feb 2008 15:22:54 -0500
> From: Keith Snavely <Keith.Snavely@ncmail.net>
> To: rskalka@kbhomes.com

> CC: RConchilla <RConchilla@ecslimited.com>, SMBrown
> <SMBrown@ecslimited.com>
>
>
>
> Rosemary,
>
> I hope you are doing well today. I am checking on the status of the

> final report for the soil investigations conducted at 20 homes in the
> Twin Lakes subdivision in Morrisville. If you have any updates on the

> report, let me know. Have a great day!
>
>
> Keith
>
>
>
>
> Keith Snavelly, Hydrogeologist
> Superfund Section
> Inactive Hazardous Sites Branch
> 401 Oberlin Road, Suite 150
> Raleigh, NC 27605
>
> Telephone : (919) 508-8479
> Fax: (919) 733- 4811
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Snavely, Keith

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Snavely, Keith

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>
> Hope you had a good holiday. Re-entry is pretty daunting in our shop
> and I imagine for you as well. Hang in there.
>
> What's the latest on Twin Lakes? Do we have a complete report yet?
>
> Thanks, Cathy

>
>
> -----Original Message-----
> **From:** Keith Snavely [mailto:Keith.Snavely@ncmail.net]
> **Sent:** Friday, December 21, 2007 3:28 PM
> **To:** Cathy Cralle Jones
> **Subject:** Re: Knichel: Twin Lakes Report???

>
> Cathy,
>

> I received the missing data from the Knichel report after the email I
> sent to you this morning. Ryan Conchilla indicated on an email -all
> sampling was completed for the 20 homes (I knew that) but I think he
> meant to say all data is complete and report is almost complete- but I
> haven't got that answer from him or Mark Brown with ECS. Ryan has left

> for the holidays. If I hear anything before I leave I will email you.

I

> will be out next week, in on 31st and back on Jan 2, 2008.

>

> Have a great Christmas and New Year!

>

> Keith

>

>

>

> Cathy Cralle Jones wrote:

>

>> Keith - I was wondering if the report on the Twin Lakes (20
>> properties) assessment had come in? It will be the first of the year
>> before I can get over to get it, but I didn't want it to drop off my
>> radar.

>>

>> Thanks and I hope you have a wonderful holiday,

>>

>> Cathy

>>

>> Catherine Cralle Jones, Esq.

>>

>> Law Office of F. Bryan Brice, Jr.

>>

>> 19 W. Hargett St., Suite 600

>>

>> Raleigh, NC 27601

>>

>> (919) 754-1600

>>

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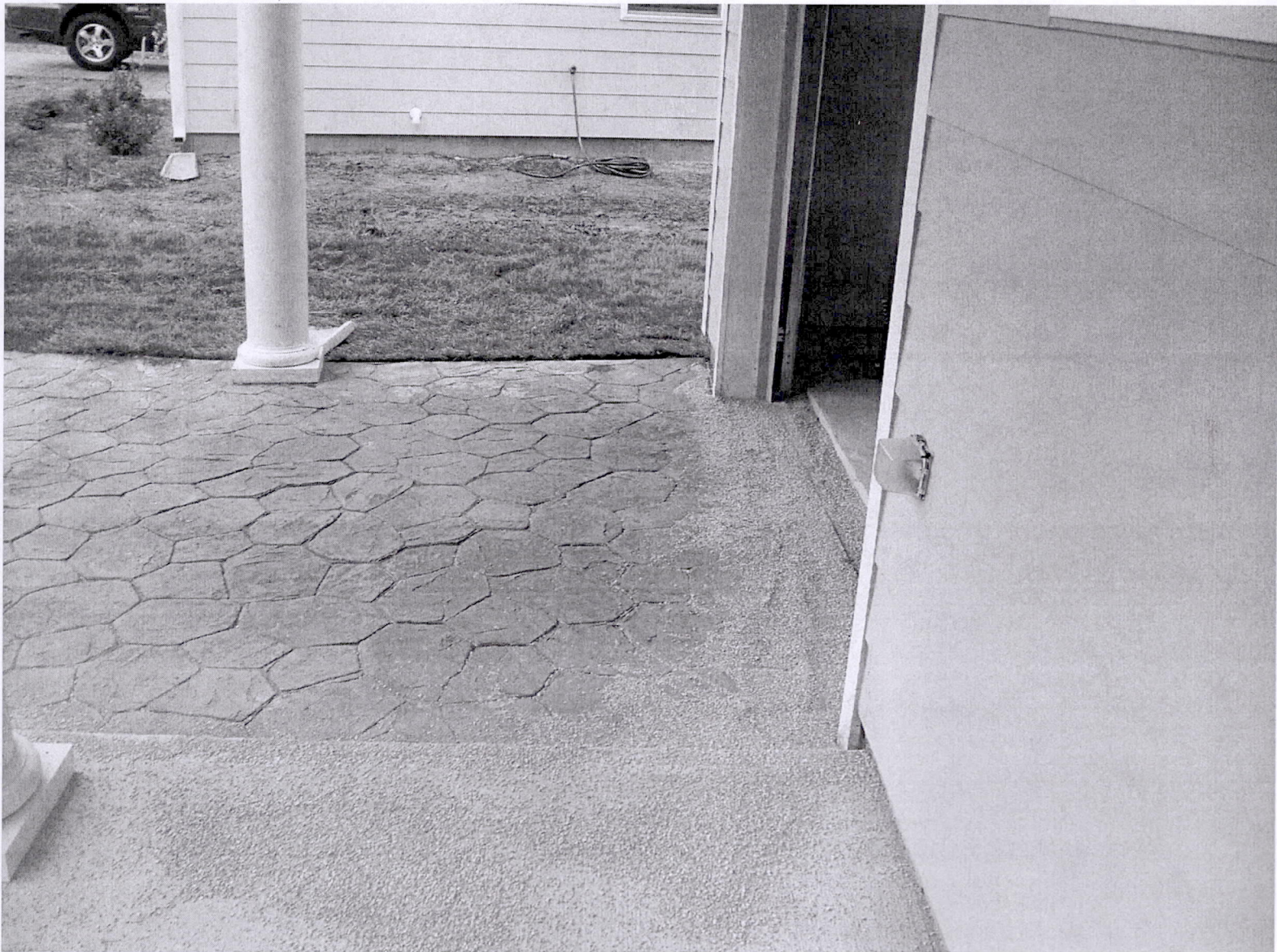
>>
>
>
>> to waive any privilege, including the attorney-client privilege, that
>> may attach to this communication. Thank you for your cooperation.
>>
>>
>
>
>
>

Photos of September 21, 2007 site visit to the
223 Rope Walk Court - Knickel Residence.

RKS
Keith Snively

Photos show that material was applied to stained area to
soaked up the xylene et stripping agent that pooled at
the front of the House garage. The spill occurred sometime near Sept. 18th & 19th
of 2007

FILE



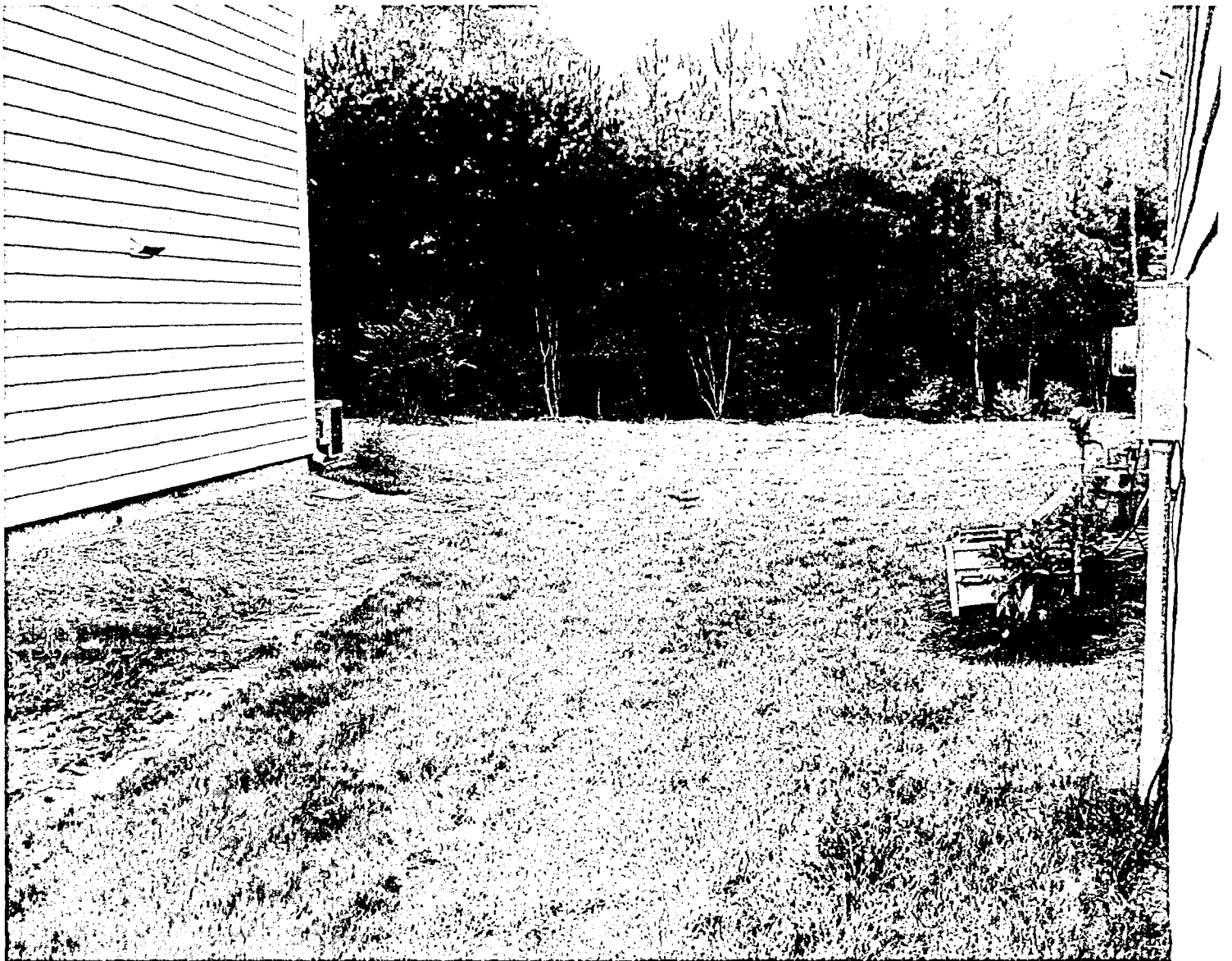


204 15



32415





5 of 15



6 of 15



7 of 15



9 of 15





10 of 15



11 of 15



12 of 15





14 of 15



15 of 15

Snavely, Keith

From: RConchilla [RConchilla@ecslimited.com]
Sent: Thursday, December 20, 2007 2:27 PM
To: Keith Snavely
Cc: SMBrown
Subject: Indoor Air Quality Report Re-Assessment- 15416-F
Attachments: 06-15416F-IAQ Report.pdf

Keith,

Attached please find the complete air quality report (including lab results) which is Appendix D of the Phase II RI Report.

ECS has completed excavation and sampling activities at the 20 residences located at the Twin Lakes Subdivision.

FYI-

I will be out of the office all next week for the Xmas Holiday. If you have any immediate questions please contact Mark at 919-291-9200.

Thank you and have a Merry Christmas!

Ryan J. Conchilla

Senior Environmental Scientist

Phase I Team Leader

ECS Carolinas, LLP

9001 Glenwood Avenue

Raleigh, NC 27617-7505

(919) 861-9862 (direct voice)

(919) 291-5744 (mobile)

(919) 861-9910 (office)

(919) 861-9911 (office fax)

email: rconchilla@ecslimited.com

The ECS Group of Companies

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Snavely, Keith

From: Cathy Cralle Jones [cathy@attybryanbrice.com]
Sent: Thursday, December 20, 2007 9:57 AM
To: Keith Snavely
Subject: Knichel: Twin Lakes Report???

Keith – I was wondering if the report on the Twin Lakes (20 properties) assessment had come in? It will be the first of the year before I can get over to get it, but I didn't want it to drop off my radar.

Thanks and I hope you have a wonderful holiday,

Cathy

Catherine Cralle Jones, Esq.
Law Office of F. Bryan Brice, Jr.
19 W. Hargett St., Suite 600
Raleigh, NC 27601
(919) 754-1600

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Mr. Travis Cope
Senior Regional Counsel
KB Home
10990 Wilshire Blvd (7th Floor)
Los Angeles, CA 90024

December 11, 2007

Reference: Report of Indoor Air Quality Re-Assessment
223 Rope Walk Drive
Morrisville, North Carolina
ECS Carolinas, LLP Project 15416-F

Dear Mr. Cope:

ECS Carolinas, LLP (ECS) is pleased to provide KB Home with the results of the indoor air quality re-assessment for the above-referenced project. The purpose of this assessment is to monitor the levels of Volatile Organic Compounds (VOCs) and re-test per the request from the State of North Carolina Division of Water Quality Inactive Hazardous Sites Branch (IHSB). Our services were provided as proposed in ECS Proposal No. 06-11657 dated November 21, 2007.

This report presents results of an Indoor Air Quality re-Assessment (IAQA) conducted at 223 Rope Walk Drive located in Morrisville, North Carolina. An initial walk-thru observation and sampling was conducted on October 4, 2007 (ECS Project No. 15416-B). The work was performed in order to determine the levels, if any, of total VOCs, in particular xylene and Ethylbenzene, detectable within the single-family residence after the initial testing. ECS was requested by IHSB to conduct follow-up sampling in a letter dated October 22, 2007. The IHSB uses the toxic action level of 7000 ug/m³ for xylene.

Even though the initial air sample results 550 ug/m³ indicated that xylene is below toxic action levels, a second indoor air sampling event was requested by IHSB. These indoor air results do not necessarily indicate that the elevated xylenes came from the driveway cleanup only but show a combination of VOCs existing in the house prior to and during the tests. These VOCs can result from off-gasing of carpeting from new homes, paints, and varnishes, and VOCs from gasoline cans. ECS was asked to set up four TO-15 canisters and collect data for VOCs to see if odors from the use of xylene during the cleanup are continuing to contribute to the elevated levels in the house.

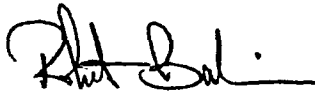
Testing was performed in accordance with general guidelines provided in EPA Method 1P-1B. The acceptance criteria were adopted from relevant industry standards. The maximum level of VOC for buildings defined as construction completed more than 6 months prior to sampling is 200 micrograms per cubic meter (ug/m³) of air. Results are provided in the attached table.

Results of the testing on October 29, 2007 revealed that the samples taken inside were not elevated above the 200 ug/m³ action limit. The outside levels were not greater than the 200 ug/m³ limit.

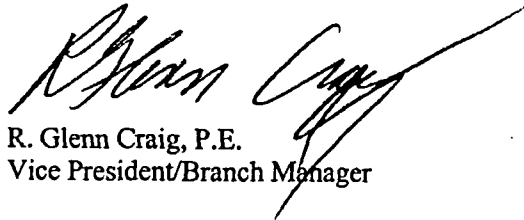
Refer to the section "Results" for a tabulated summary of data and Appendix "A" for data sheets for each sample. The deficiencies are described in the section titled "Conclusions and Recommendations" below.

The data presented in this report is indicative of the site at the time and date tested. If you have any questions please do not hesitate to call us at (919) 861-9910.

Sincerely,
ECS Carolinas, LLP



Rohit Bali, CMR, CIE
Industrial Hygiene Section Manager



R. Glenn Craig, P.E.
Vice President/Branch Manager

**INDOOR AIR QUALITY ASSESSMENT
223 ROPE WALK DRIVE
MORRISVILLE, NORTH CAROLINA**

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1.0 Project Information

An indoor air quality re-assessment was conducted for KB Home (KB Home) at 223 Rope Walk Drive in Morrisville, North Carolina. This is a single-family residence. ECS was asked to conduct an air sampling re-assessment due to odor concerns reported by the homeowner after a solvent containing xylene was used in the driveway. The homeowner reported that elevated odors were detected in several areas of the house, and present for a few weeks prior to the initial tests.

2.0 Scope of Services

The re-assessment was performed on October 29, 2007 by Mr. Rohit Bali, Industrial Hygiene Manager of ECS Carolinas, LLP (ECS). The purpose of the re-assessment was to document the level of odors within the residence. ECS was asked by the North Carolina Department of Environmental and Natural Resources, Division of Waste Management, Inactive Hazardous Site Branch (IHSB) to conduct follow-up sampling in a letter dated October 22, 2007. The house has a typical 2-3 ton HVAC system with a gas fired system which was not operating during these tests. The sampling was conducted in general accordance with the NIOSH Method TO-15. Results are compared to applicable Environmental Protection Agency (EPA) and European Government recommendations concerning indoor VOC concentrations.

Airborne VOC samples were collected in various rooms of the house, using a time calibrated regulator. Samples were collected on evacuated canisters, from four to seven feet above the floor, for eight hours. Analysis was conducted by EMSL Analytical Laboratories, located in Weston, New Jersey using NIOSH Method TO-15 (Gas Chromatography/Mass Spectrometry) (VOC). Results are reported as total VOC's. Results are compared to applicable EPA recommendations concerning indoor VOC concentrations.

Sample data were entered on chain of custody forms, and shipped overnight, via Federal Express, and delivered to the laboratory. Copies of the all Field Sample Data Sheets, Chain of Custody Forms, and laboratory reports are attached in the Appendix.

3.0 Recommended Criteria

Five re-assessment areas were selected by IHSB and the home owner. The first sample indoors was collected in the kitchen, the second sample indoors was collected in an upstairs bedroom (Jake's Room), the third sample indoors was collected in the garage, the fourth indoor sample was collected in a playroom upstairs, and the fifth sample was located outside by the pond. The containers ran for approximately 480 minutes, which is required to achieve the desired Limit of Detection (LOD).

The standard criteria calls for VOC levels collected to be less than 500 ug/m³ of air for new buildings (defined as construction completed less than 6 months prior to sampling). For other than new buildings, to meet the performance specification for success, each VOC sample collected must be less than 200 ug/m³ of air in the indoor atmosphere. This home is approximately one year old.

As reported in Patty's Industrial Hygiene (Patty) elevated VOC levels indoors, are not characteristic of well-operated and maintained buildings. Patty's Industrial Hygiene, Fifth Edition, Volume 4, p. 3165 goes on to report (p. 3167) that "occupant complaints are almost

always encountered when total VOC (TVOC) levels are 3,000 $\mu\text{g}/\text{m}^3$ or higher. At TVOC levels of 200 – 3,000 $\mu\text{g}/\text{m}^3$, occupant discomfort and irritation complaints are manifested if other exposures occur simultaneously. At levels below 200 $\mu\text{g}/\text{m}^3$ discomfort and complaints due to VOCs should be minimal. However, the dose-response relationship is negated when highly odorous VOCs are present in indoor air. In other words, even low concentrations of these VOCs can elicit complaints. Patty also reports that most buildings have TVOC levels in the 50 –200 $\mu\text{g}/\text{m}^3$ range (p. 3168). While TVOC is one overall indicator, most professionals do not use it as the sole indicator of Indoor Air Quality (IAQ) problems. Rather, an analysis of the distribution and rank order of individual VOCs is more fruitful in determining the relationship of and solutions for building related symptoms.”

Several guidelines for TVOC in indoor air have been developed. The European Collaborative Action (ECA) Report 11, titled Guidelines for Ventilation Requirements in Buildings (CEC, 1992) lists the following TVOC concentration ranges:

1. Comfort Range	<200 $\mu\text{g}/\text{m}^3$
2. Multifactorial Exposure Range	200-3,000 $\mu\text{g}/\text{m}^3$
3. Discomfort Range	3,000-25,000 $\mu\text{g}/\text{m}^3$
4. Toxic Range	>25,000 $\mu\text{g}/\text{m}^3$

In 1989 the State of Washington developed indoor air quality specifications for new office buildings. These specifications require that emissions from products and building materials result in an indoor air concentration of TVOC no higher than 500 $\mu\text{g}/\text{m}^3$. The EPA has recently instituted project specifications for new buildings that will also limit building air concentration of TVOC to levels no greater than 500 $\mu\text{g}/\text{m}^3$.

Health effects of VOCs at these levels are highly controversial. Occupational Exposure Limits (OELs), where they exist, are generally developed for exposures an order of magnitude above those encountered in typical indoor air situations. A quick literature search of the predominant VOCs found in the air samples indicated that most were skin, eye, and respiratory irritants at some level. None were found to be listed as suspect carcinogens by the National Toxicology Program. As indicated in the European guidelines, VOC concentrations at these levels are not considered acutely toxic for most of the population. However, it has been demonstrated, as reported in Patty, that significant symptoms can appear in employee populations at these concentrations, depending on the individual circumstances of the situation.

4.0 Sample Results

The indoor TVOC levels observed in the sample collected on October 29, 2007 did not exceed recommended thresholds discussed above.

All TVOC samples were analyzed to qualitative VOCs using a TO-15 evacuated canister over an 8-hour period. Results are presented in the Tables and Laboratory Reports contained in the Appendix. It should be noted that low level VOCs may be emitted from a wide range of sources including furniture, carpet, paint, adhesives, printer and copier emissions, electrical and computer burn off, etc, or transient sources ranging from cough drop flavoring to personal care, grooming, and facility cleaning products.

Every effort has been made to provide a complete evaluation as professionally practical. However, inherent constraints of time, observation, and scope of work must be recognized. Observations, findings, results and conclusions are based upon observations at the facility and

results of analyses of the samples obtained during the assessment. The findings are representative of conditions apparent at the time and not necessarily indicative of previous or current conditions. Management should assess and analyze each area in relation to available resources, objectives and activities. This report is intended for the exclusive use of KB Home and shall not be relied upon by any other parties without prior written consent of ECS Carolinas, LLP.

5.0 Conclusions and Recommendations

Based on a review of the reported sampling results, the indoor air quality within the residence appears to be within the normal range defined by the EPA. ECS has no recommendations at this time. If more information becomes available or more odors occur, ECS should be notified so that we can re-test or re-evaluate the source of odors. During the site walk-thru no visible source was determined for the odors.

APPENDIX I

Sampling Results



EMSL Analytical, Inc., IH Laboratory, 3 Cooper Street, Westmont, NJ 08108 phone (800)220-3675

November 12, 2007

Rohit Bali
ECS Carolinas, LLP
9001 Glenwood Ave
Raleigh, NC 27617

Email: rbali@ecslimited.com

RE: EMSL 280701955

Project:

TO-15 ANALYSIS

Dear Rohit:

Attached please find the lab report and results for the above referenced analysis. If you have any questions or need further information, please do not hesitate to contact me at extension 1275. If you require data interpretation, please contact Vince Daliessio, CIH, at extension 1240.

Sincerely,

Scott VanEtten
Senior Chemist
IH Laboratory Manager

NJ-NELAP Laboratory No. 04653

VOLATILE ORGANICS DATA ANALYSIS SUMMARY
EPA COMPENDIUM TO-15

Lab Name:	EMSL ANALYTICAL	Air Results for Project:	EMSL 280701955
Lab City:	WESTMONT, NJ	Field ID Number:	KITCHEN
Instrument ID:	5972-VOA#4	Laboratory ID Number:	280701955-1
GC Column:	RTX-502.2 60m 0.25mm 1.4u	Sampling Date:	10/29/07
Acquisition Method:	101207TO.M	Lab File ID:	j6611.d
Calibration Date:	10/12/07	Analysis Date:	11/05/07
Matrix:	Air	Time Acquired:	22:45
Latest MDL Date:	7/13/07	Sample Volume(mL):	250
Analyst:	MTH	Dilution Factor:	1
		Can ID:	T2156

Compound	CAS Number	Molecular Weight	Results ppbv	Q	Results ug/m3	
Ethylbenzene	100-41-4	106	1.6		6.9	
Xylene (para & meta)	1330-20-7	106	4.9		21	
Xylene (Ortho)	95-47-6	106	2.3		9.9	

Surrogate	Result(ppbv)	True(ppbv)	%Recovery	Limits %
4-Bromofluorobenzene	10.02	10.00	100	70 - 130

(NO 'U' IN FIELD) = COMPOUND DETECTED AT REPORTED CONCENTRATION IN PPBV AND UG/M3.

U= UNDETECTED

D = DILUTED. REPORTED FROM DILUTION RUN. VALUE IS ACCURATE.

B= DETECTED IN BLANK

E = ESTIMATED CONCENTRATION. EXCEEDED CALIBRATION LIMIT.

J= DETECTED BELOW PRACTICAL QUANTITATION LEVEL, BUT ABOVE MDL.

VOLATILE ORGANICS DATA ANALYSIS SUMMARY
EPA COMPENDIUM TO-15

Lab Name:	EMSL ANALYTICAL	Air Results for Project:	EMSL 280701955
Lab City:	WESTMONT, NJ	Field ID Number:	JAKE'S ROOM
Instrument ID:	5972-VOA#4	Laboratory ID Number:	280701955-2
GC Column:	RTX-502.2 60m 0.25mm 1.4u	Sampling Date:	10/29/07
Acquisition Method:	101207TO.M	Lab File ID:	j6612.d
Calibration Date:	10/12/07	Analysis Date:	11/05/07
Matrix:	Air	Time Acquired:	23:36
Latest MDL Date:	7/13/07	Sample Volume(mL):	250
Analyst:	MTH	Dilution Factor:	1
		Can ID:	T1211

Compound	CAS Number	Molecular Weight	Results ppbv	Q	Results ug/m3	
Ethylbenzene	100-41-4	106	1.7		7.2	
Xylene (para & meta)	1330-20-7	106	5.2		23	
Xylene (Ortho)	95-47-6	106	2.3		10	

Surrogate	Result(ppbv)	True(ppbv)	%Recovery	Limits %
4-Bromofluorobenzene	9.91	10.00	99	70 - 130

(NO "U" IN FIELD) = COMPOUND DETECTED AT REPORTED CONCENTRATION IN PPBV AND UG/M3.

U= UNDETECTED

D = DILUTED. REPORTED FROM DILUTION RUN. VALUE IS ACCURATE.

B= DETECTED IN BLANK

E = ESTIMATED CONCENTRATION. EXCEEDED CALIBRATION LIMIT.

J= DETECTED BELOW PRACTICAL QUANTITATION LEVEL, BUT ABOVE MDL.

VOLATILE ORGANICS DATA ANALYSIS SUMMARY
EPA COMPENDIUM TO-15

Lab Name:	EMSL ANALYTICAL	Air Results for Project:	EMSL 280701955
Lab City:	WESTMONT, NJ	Field ID Number:	GARAGE
Instrument ID:	5972-VOA#4	Laboratory ID Number:	280701955-3
GC Column:	RTX-502.2 60m 0.25mm 1.4u	Sampling Date:	10/29/07
Acquisition Method:	101207TO.M	Lab File ID:	j6613.d
Calibration Date:	10/12/07	Analysis Date:	11/08/07
Matrix:	Air	Time Acquired:	0:27
Latest MDL Date:	7/13/07	Sample Volume(mL):	250
Analyst:	MTH	Dilution Factor:	1
		Can ID:	T2130

Compound	CAS Number	Molecular Weight	Results ppbv	Q	Results ug/m3	
Ethylbenzene	100-41-4	106	2.4		10	
Xylene (para & meta)	1330-20-7	106	8.2		36	
Xylene (Ortho)	95-47-6	106	4.1		18	

Surrogate	Result(ppbv)	True(ppbv)	%Recovery	Limits %
4-Bromofluorobenzene	9.50	10.00	95	70 - 130

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VOLATILE ORGANICS DATA ANALYSIS SUMMARY
EPA COMPENDIUM TO-15

Lab Name:	EMSL ANALYTICAL	Air Results for Project:	EMSL 280701955
Lab City:	WESTMONT, NJ	Field ID Number:	PLAYROOM
Instrument ID:	5972-VOA#4	Laboratory ID Number:	280701955-4
GC Column:	RTX-502.2 60m 0.25mm 1.4u	Sampling Date:	10/29/07
Acquisition Method:	101207TO.M	Lab File ID:	j6614.d
Calibration Date:	10/12/07	Analysis Date:	11/06/07
Matrix:	Air	Time Acquired:	1:17
Latest MDL Date:	7/13/07	Sample Volume(mL):	250
Analyst:	MTH	Dilution Factor:	1
		Can ID:	T1999

Compound	CAS Number	Molecular Weight	Results ppbv	Q	Results ug/m3	
Ethylbenzene	100-41-4	106	1.6		7.0	
Xylene (para & meta)	1330-20-7	106	5.2		23	
Xylene (Ortho)	95-47-6	106	2.3		10	

Surrogate	Result(ppbv)	True(ppbv)	%Recovery	Limits %
4-Bromofluorobenzene	10.09	10.00	101	70 - 130

(NO 'U' IN FIELD) = COMPOUND DETECTED AT REPORTED CONCENTRATION IN PPBV AND UG/M3.

U = UNDETECTED

D = DILUTED. REPORTED FROM DILUTION RUN. VALUE IS ACCURATE.

B = DETECTED IN BLANK

E = ESTIMATED CONCENTRATION. EXCEEDED CALIBRATION LIMIT.

J = DETECTED BELOW PRACTICAL QUANTITATION LEVEL, BUT ABOVE MDL.

VOLATILE ORGANICS DATA ANALYSIS SUMMARY
EPA COMPENDIUM TO-15

Lab Name:	EMSL ANALYTICAL	Air Results for Project:	EMSL 280701955
Lab City:	WESTMONT, NJ	Field ID Number:	OUTSIDE AIR
Instrument ID:	5972-VOA#4	Laboratory ID Number:	280701955-5
GC Column:	RTX-502.2 60m 0.25mm 1.4u	Sampling Date:	10/29/07
Acquisition Method:	101207TO.M	Lab File ID:	j6615.d
Calibration Date:	10/12/07	Analysis Date:	11/06/07
Matrix:	Air	Time Acquired:	2:08
Latest MDL Date:	7/13/07	Sample Volume(mL):	250
Analyst:	MTH	Dilution Factor:	1
		Can ID:	T1904

Compound	CAS Number	Molecular Weight	Results ppbv	Q	Results ug/m3	
Ethylbenzene	100-41-4	106	0.50	U	2.2	
Xylene (para & meta)	1330-20-7	106	0.50	U	2.2	
Xylene (Ortho)	95-47-6	106	0.50	U	2.2	

Surrogate	Result(ppbv)	True(ppbv)	%Recovery	Limits %
4-Bromofluorobenzene	8.97	10.00	90	70 - 130

(NO 'U' IN FIELD) = COMPOUND DETECTED AT REPORTED CONCENTRATION IN PPBV AND UG/M3.

U= UNDETECTED

D = DILUTED. REPORTED FROM DILUTION RUN. VALUE IS ACCURATE.

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J= DETECTED BELOW PRACTICAL QUANTITATION LEVEL, BUT ABOVE MDL.

VOLATILE ORGANICS DATA ANALYSIS SUMMARY
EPA COMPENDIUM TO-15

Lab Name: EMSL ANALYTICAL
Lab City: WESTMONT, NJ
Instrument ID: 5972-VOA#4
GC Column: RTX-502.2 60m 0.25mm 1.4u
Acquisition Method: 101207TO.M
Calibration Date: 10/12/07
Matrix: Air
Latest MDL Date: 7/13/07
Analyst: MTH

Air Results for Project: EMSL 280701955
Field ID Number: KITCHEN
Laboratory ID Number: 280701955-1
Sampling Date: 10/29/07
Lab File ID: j6611.d
Analysis Date: 11/05/07
Time Acquired: 22:45
Sample Volume(mL): 250
Dilution Factor: 1
Can ID: T2155

Compound	CAS Number	Molecular Weight	Results ppbv	Q	Results ug/m3	
Propylene	115-07-1	42	1.0	U	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	121	0.50	U	2.5	
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	171	0.50	U	3.5	
Chloromethane	74-87-3	50	0.69		1.4	
Vinyl chloride	75-01-4	63	0.50	U	1.3	
1,3-Butadiene	106-99-0	54	0.50	U	1.1	
Bromomethane	74-83-9	95	0.50	U	1.9	
Chloroethane	75-00-3	65	0.50	U	1.3	
Ethanol	64-17-5	46	498	D,E	940	
Bromoethene (Vinyl bromide)	593-60-2	107	0.50	U	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137	0.50	U	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60	6.5		16	
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	187	0.50	U	3.8	
Acetone	67-64-1	58	33		78	
1,1-Dichloroethene	75-35-4	97	0.50	U	2.0	
Acetonitrile	75-05-8	41	0.50	U	0.84	
Tertiary butyl alcohol (TBA)	75-65-0	74	0.96		2.9	
Bromoethane (Ethyl bromide)	74-96-4	108	0.50	U	2.2	
3-Chloropropene (Allyl chloride)	107-05-1	77	0.50	U	1.6	
Carbon disulfide	75-15-0	76	0.50	U	1.6	
Methylene chloride	75-09-2	85	1.5	U	5.2	
Acrylonitrile	107-13-1	53	0.50	U	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88	0.50	U	1.8	
trans-1,2-Dichloroethene	156-60-5	97	0.50	U	2.0	
n-Hexane	110-54-3	86	1.1		3.8	
1,1-Dichloroethane	75-34-3	99	0.50	U	2.0	
Vinyl acetate	108-05-4	86	0.50	U	1.8	
2-Butanone(MEK)	78-93-3	72	1.4		4.2	
cis-1,2-Dichloroethene	156-59-2	97	0.50	U	2.0	
Ethyl acetate	141-78-6	88	0.55		2.0	
Chloroform	67-66-3	119	0.53		2.6	
Tetrahydrofuran	109-99-9	72	0.50	U	1.5	
1,1,1-Trichloroethane	71-55-6	133	0.50	U	2.7	
Cyclohexane	110-82-7	84	0.50	U	1.7	
2,2,4-Trimethylpentane (Isooctane)	540-84-1	114	0.50	U	2.3	
Carbon tetrachloride	56-23-5	154	0.50	U	3.1	
n-Heptane	142-82-5	100	0.50	U	2.0	
1,2-Dichloroethane	107-06-2	99	0.50	U	2.0	
Benzene	71-43-2	78	0.78		2.5	
Trichloroethene	79-01-6	131	0.50	U	2.7	
1,2-Dichloropropane	78-87-5	113	0.50	U	2.3	
Bromodichloromethane	75-27-4	164	0.50	U	3.3	
1,4-Dioxane	123-91-1	88	0.50	U	1.8	
4-Methyl-2-pentanone(MIBK)	108-10-1	100	0.50	U	2.0	
cis-1,3-Dichloropropene	10061-01-5	111	0.50	U	2.3	
Toluene	108-88-3	92	4.7		18	

VOLATILE ORGANICS DATA ANALYSIS SUMMARY
EPA COMPENDIUM TO-15

Lab Name:	EMSL ANALYTICAL	Air Results for Project:	EMSL 280701955
Lab City:	WESTMONT, NJ	Field ID Number:	KITCHEN
Instrument ID:	5972-VOA#4	Laboratory ID Number:	280701955-1
GC Column:	RTX-502.2 60m 0.25mm 1.4u	Sampling Date:	10/29/07
Acquisition Method:	101207TO.M	Lab File ID:	j6611.d
Calibration Date:	10/12/07	Analysis Date:	11/05/07
Matrix:	Air	Time Acquired:	22:45
Latest MDL Date:	7/13/07	Sample Volume(mL):	250
Analyst:	MTH	Dilution Factor:	1
		Can ID:	T2156

Compound	CAS Number	Molecular Weight	Results ppbv	Q	Results ug/m3	
trans-1,3-Dichloropropene	10061-02-6	111	0.50	U	2.3	
1,1,2-Trichloroethane	79-00-5	133	0.50	U	2.7	
2-Hexanone(MBK)	591-78-6	100	0.50	U	2.0	
Tetrachloroethene	127-18-4	166	0.50	U	3.4	
Dibromochloromethane	124-48-1	208	0.50	U	4.3	
1,2-Dibromoethane	106-93-4	188	0.50	U	3.8	
Chlorobenzene	108-90-7	113	0.50	U	2.3	
Ethylbenzene	100-41-4	106	1.6		6.9	
Xylene (para & meta)	1330-20-7	106	4.9		21	
Xylene (Ortho)	95-47-6	106	2.3		9.9	
Styrene	100-42-5	104	0.72		3.1	
Bromoform	75-25-2	253	0.50	U	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	168	0.50	U	3.4	
4-Ethyltoluene	622-96-8	120	0.85		4.2	
1,3,5-Trimethylbenzene	108-67-8	120	0.50	U	2.5	
2-Chlorotoluene	95-49-8	127	0.50	U	2.6	
1,2,4-Trimethylbenzene	95-63-6	120	1.5		7.2	
1,3-Dichlorobenzene	541-73-1	147	0.50	U	3.0	
1,4-Dichlorobenzene	106-46-7	147	0.50	U	3.0	
Benzyl chloride	100-44-7	179	0.50	U	3.7	
1,2-Dichlorobenzene	95-50-1	147	0.50	U	3.0	
1,2,4-Trichlorobenzene	120-82-1	182	0.50	U	3.7	
Hexachloro-1,3-butadiene	87-68-3	261	0.50	U	5.3	

Surrogate	Result(ppbv)	True(ppbv)	%Recovery	Limits %
4-Bromofluorobenzene	10.02	10.00	100	70 - 130

(NO 'U' IN FIELD) = COMPOUND DETECTED AT REPORTED CONCENTRATION IN PPBV AND UG/M3.

U= UNDETECTED

D = DILUTED. REPORTED FROM DILUTION RUN. VALUE IS ACCURATE.

B= DETECTED IN BLANK

E = ESTIMATED CONCENTRATION. EXCEEDED CALIBRATION LIMIT.

J= DETECTED BELOW PRACTICAL QUANTITATION LEVEL, BUT ABOVE MDL

VOLATILE ORGANICS DATA ANALYSIS SUMMARY
EPA COMPENDIUM TO-15

Lab Name: EMSL ANALYTICAL
Lab City: WESTMONT, NJ
Instrument ID: 5972-VOA#4
GC Column: RTX-502.2 60m 0.25mm 1.4u
Acquisition Method: 101207TOM
Calibration Date: 10/12/07
Matrix: Air
Latest MDL Date: 7/13/07
Analyst: MTH

Air Results for Project: EMSL 280701955
Field ID Number: JAKE'S ROOM
Laboratory ID Number: 280701955-2
Sampling Date: 10/29/07
Lab File ID: j6612.d
Analysis Date: 11/05/07
Time Acquired: 23:36
Sample Volume(mL): 250
Dilution Factor: 1
Can ID: T1211

Compound	CAS Number	Molecular Weight	Results ppbv	Q	Results ug/m3	
Propylene	115-07-1	42	1.0	U	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	121	0.50	U	2.5	
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	171	0.50	U	3.5	
Chloromethane	74-87-3	50	0.78		1.6	
Vinyl chloride	75-01-4	63	0.50	U	1.3	
1,3-Butadiene	106-99-0	54	0.50	U	1.1	
Bromomethane	74-83-9	95	0.50	U	1.9	
Chloroethane	75-00-3	65	0.50	U	1.3	
Ethanol	64-17-5	46	584	D,E	760	
Bromoethene (Vinyl bromide)	593-60-2	107	0.50	U	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137	0.50	U	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60	7.2		18	
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	187	0.50	U	3.8	
Acetone	67-64-1	58	44	D	99	
1,1-Dichloroethene	75-35-4	97	0.50	U	2.0	
Acetonitrile	75-05-8	41	0.51		0.85	
Tertiary butyl alcohol (TBA)	75-65-0	74	0.79		2.4	
Bromoethane (Ethyl bromide)	74-96-4	108	0.50	U	2.2	
3-Chloropropene (Allyl chloride)	107-05-1	77	0.50	U	1.6	
Carbon disulfide	75-15-0	76	0.50	U	1.6	
Methylene chloride	75-09-2	85	1.5	U	5.2	
Acrylonitrile	107-13-1	53	0.50	U	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88	0.50	U	1.8	
trans-1,2-Dichloroethene	156-60-5	97	0.50	U	2.0	
n-Hexane	110-54-3	86	1.1		4.0	
1,1-Dichloroethane	75-34-3	99	0.50	U	2.0	
Vinyl acetate	108-05-4	86	0.50	U	1.8	
2-Butanone(MEK)	78-93-3	72	1.5		4.3	
cis-1,2-Dichloroethene	156-59-2	97	0.50	U	2.0	
Ethyl acetate	141-78-6	88	0.58		2.1	
Chloroform	67-66-3	119	0.51		2.5	
Tetrahydrofuran	109-99-9	72	0.50	U	1.5	
1,1,1-Trichloroethane	71-55-6	133	0.50	U	2.7	
Cyclohexane	110-82-7	84	0.50	U	1.7	
2,2,4-Trimethylpentane (Isooctane)	540-84-1	114	0.50	U	2.3	
Carbon tetrachloride	56-23-5	154	0.50	U	3.1	
n-Heptane	142-82-5	100	0.50	U	2.0	
1,2-Dichloroethane	107-06-2	99	0.50	U	2.0	
Benzene	71-43-2	78	0.77		2.5	
Trichloroethene	79-01-6	131	0.50	U	2.7	
1,2-Dichloropropane	78-87-5	113	0.50	U	2.3	
Bromodichloromethane	75-27-4	164	0.50	U	3.3	
1,4-Dioxane	123-91-1	88	0.50	U	1.8	
4-Methyl-2-pentanone(MIBK)	108-10-1	100	0.50	U	2.0	
cis-1,3-Dichloropropene	10061-01-5	111	0.50	U	2.3	
Toluene	108-88-3	92	4.9		18	

VOLATILE ORGANICS DATA ANALYSIS SUMMARY
EPA COMPENDIUM TO-15

Lab Name: EMSL ANALYTICAL
Lab City: WESTMONT, NJ
Instrument ID: 5972-VOA#4
GC Column: RTX-502.2 60m 0.25mm 1.4u
Acquisition Method: 101207TOM
Calibration Date: 10/12/07
Matrix: Air
Latest MDL Date: 7/13/07
Analyst: MTH

Air Results for Project: EMSL 280701955
Field ID Number: JAKE'S ROOM
Laboratory ID Number: 280701955-2
Sampling Date: 10/29/07
Lab File ID: j6612.d
Analysis Date: 11/05/07
Time Acquired: 23:36
Sample Volume(mL): 250
Dilution Factor: 1
Can ID: T1211

Compound	CAS Number	Molecular Weight	Results ppbv	Q	Results ug/m3	
trans-1,3-Dichloropropene	10061-02-6	111	0.50	U	2.3	
1,1,2-Trichloroethane	79-00-5	133	0.50	U	2.7	
2-Hexanone(MBK)	591-78-6	100	0.50	U	2.0	
Tetrachloroethene	127-18-4	166	0.50	U	3.4	
Dibromochloromethane	124-48-1	208	0.50	U	4.3	
1,2-Dibromoethane	106-93-4	188	0.50	U	3.8	
Chlorobenzene	108-90-7	113	0.50	U	2.3	
Ethylbenzene	100-41-4	106	1.7		7.2	
Xylene (para & meta)	1330-20-7	106	5.2		23	
Xylene (Ortho)	95-47-6	106	2.3		10	
Styrene	100-42-5	104	0.89		3.8	
Bromoform	75-25-2	253	0.50	U	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	168	0.50	U	3.4	
4-Ethyltoluene	622-96-8	120	0.87		4.3	
1,3,5-Trimethylbenzene	108-67-8	120	0.50	U	2.5	
2-Chlorotoluene	95-49-8	127	0.50	U	2.6	
1,2,4-Trimethylbenzene	95-63-6	120	1.6		7.6	
1,3-Dichlorobenzene	541-73-1	147	0.50	U	3.0	
1,4-Dichlorobenzene	106-46-7	147	0.50	U	3.0	
Benzyl chloride	100-44-7	179	0.50	U	3.7	
1,2-Dichlorobenzene	95-50-1	147	0.50	U	3.0	
1,2,4-Trichlorobenzene	120-82-1	182	0.50	U	3.7	
Hexachloro-1,3-butadiene	87-68-3	261	0.50	U	5.3	

Surrogate	Result(ppbv)	True(ppbv)	%Recovery	Limits %
4-Bromofluorobenzene	9.91	10.00	99	70 - 130

(NO 'U' IN FIELD) = COMPOUND DETECTED AT REPORTED CONCENTRATION IN PPBV AND UG/M3.

U= UNDETECTED

D= DILUTED. REPORTED FROM DILUTION RUN. VALUE IS ACCURATE.

B= DETECTED IN BLANK

E= ESTIMATED CONCENTRATION. EXCEEDED CALIBRATION LIMIT.

J= DETECTED BELOW PRACTICAL QUANTITATION LEVEL, BUT ABOVE MDL

VOLATILE ORGANICS DATA ANALYSIS SUMMARY
EPA COMPENDIUM TO-15

Lab Name: EMSL ANALYTICAL
Lab City: WESTMONT, NJ
Instrument ID: 5972-VOA#4
GC Column: RTX-502.2 60m 0.25mm 1.4u
Acquisition Method: 101207T.O.M
Calibration Date: 10/12/07
Matrix: Air
Latest MDL Date: 7/13/07
Analyst: MTH

Air Results for Project: EMSL 280701955
Field ID Number: GARAGE
Laboratory ID Number: 280701955-3
Sampling Date: 10/29/07
Lab File ID: j6613.d
Analysis Date: 11/06/07
Time Acquired: 0:27
Sample Volume(mL): 250
Dilution Factor: 1
Can ID: T2130

Compound	CAS Number	Molecular Weight	Results ppbv	Q	Results ug/m3	
Propylene	115-07-1	42	1.0	U	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	121	0.50	U	2.5	
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	171	0.50	U	3.5	
Chloromethane	74-87-3	50	0.51		1.0	
Vinyl chloride	75-01-4	63	0.50	U	1.3	
1,3-Butadiene	106-99-0	54	0.50	U	1.1	
Bromomethane	74-83-9	95	0.50	U	1.9	
Chloroethane	75-00-3	65	0.50	U	1.3	
Ethanol	64-17-5	46	28	E	53	
Bromoethene (Vinyl bromide)	593-60-2	107	0.50	U	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137	0.50	U	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60	1.5	U	3.7	
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	187	0.50	U	3.8	
Acetone	67-64-1	58	11		26	
1,1-Dichloroethene	75-35-4	97	0.50	U	2.0	
Acetonitrile	75-05-8	41	0.50	U	0.84	
Tertiary butyl alcohol (TBA)	75-65-0	74	0.50	U	1.5	
Bromoethane (Ethyl bromide)	74-96-4	108	0.50	U	2.2	
3-Chloropropene (Allyl chloride)	107-05-1	77	0.50	U	1.6	
Carbon disulfide	75-15-0	76	0.50	U	1.6	
Methylene chloride	75-09-2	85	1.5	U	5.2	
Acrylonitrile	107-13-1	53	0.50	U	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88	0.50	U	1.8	
trans-1,2-Dichloroethene	156-60-5	97	0.50	U	2.0	
n-Hexane	110-54-3	86	2.3		8.1	
1,1-Dichloroethane	75-34-3	99	0.50	U	2.0	
Vinyl acetate	108-05-4	86	0.50	U	1.8	
2-Butanone(MEK)	78-93-3	72	0.77		2.3	
cis-1,2-Dichloroethene	156-59-2	97	0.50	U	2.0	
Ethyl acetate	141-78-6	88	0.50	U	1.8	
Chloroform	67-66-3	119	0.50	U	2.4	
Tetrahydrofuran	109-99-9	72	0.50	U	1.5	
1,1,1-Trichloroethane	71-55-6	133	0.50	U	2.7	
Cyclohexane	110-82-7	84	0.57		2.0	
2,2,4-Trimethylpentane (Isooctane)	540-84-1	114	0.90		4.2	
Carbon tetrachloride	56-23-5	154	0.50	U	3.1	
n-Heptane	142-82-5	100	0.74		3.0	
1,2-Dichloroethane	107-06-2	99	0.50	U	2.0	
Benzene	71-43-2	78	1.5		4.7	
Trichloroethene	79-01-6	131	0.50	U	2.7	
1,2-Dichloropropane	78-87-5	113	0.50	U	2.3	
Bromodichloromethane	75-27-4	164	0.50	U	3.3	
1,4-Dioxane	123-91-1	88	0.50	U	1.8	
4-Methyl-2-pentanone(MIBK)	108-10-1	100	0.50	U	2.0	
cis-1,3-Dichloropropene	10061-01-5	111	0.50	U	2.3	
Toluene	108-88-3	92	5.2		20	

VOLATILE ORGANICS DATA ANALYSIS SUMMARY
EPA COMPENDIUM TO-15

Lab Name:	EMSL ANALYTICAL	Air Results for Project:	EMSL 280701955
Lab City:	WESTMONT, NJ	Field ID Number:	GARAGE
Instrument ID:	5972-VOA#4	Laboratory ID Number:	280701955-3
GC Column:	RTX-502.2 60m 0.25mm 1.4u	Sampling Date:	10/29/07
Acquisition Method:	101207TO.M	Lab File ID:	j6613.d
Calibration Date:	10/12/07	Analysis Date:	11/06/07
Matrix:	Air	Time Acquired:	0:27
Latest MDL Date:	7/13/07	Sample Volume(mL):	250
Analyst:	MTH	Dilution Factor:	1
		Can ID:	T2130

Compound	CAS Number	Molecular Weight	Results ppbv	Q	Results ug/m3	
trans-1,3-Dichloropropene	10061-02-6	111	0.50	U	2.3	
1,1,2-Trichloroethane	79-00-5	133	0.50	U	2.7	
2-Hexanone(MBK)	591-78-6	100	0.50	U	2.0	
Tetrachloroethene	127-18-4	166	0.50	U	3.4	
Dibromochloromethane	124-48-1	208	0.50	U	4.3	
1,2-Dibromoethane	106-93-4	188	0.50	U	3.8	
Chlorobenzene	108-90-7	113	0.50	U	2.3	
Ethylbenzene	100-41-4	106	2.4		10	
Xylene (para & meta)	1330-20-7	106	8.2		36	
Xylene (Ortho)	95-47-6	106	4.1		18	
Styrene	100-42-5	104	0.50	U	2.1	
Bromoform	75-25-2	253	0.50	U	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	168	0.50	U	3.4	
4-Ethyltoluene	622-96-8	120	1.3		6.2	
1,3,5-Trimethylbenzene	108-67-8	120	0.50	U	2.5	
2-Chlorotoluene	95-49-8	127	0.50	U	2.6	
1,2,4-Trimethylbenzene	95-63-6	120	1.5		7.2	
1,3-Dichlorobenzene	541-73-1	147	0.50	U	3.0	
1,4-Dichlorobenzene	106-46-7	147	0.50	U	3.0	
Benzyl chloride	100-44-7	179	0.50	U	3.7	
1,2-Dichlorobenzene	95-50-1	147	0.50	U	3.0	
1,2,4-Trichlorobenzene	120-82-1	182	0.50	U	3.7	
Hexachloro-1,3-butadiene	87-68-3	261	0.50	U	5.3	

Surrogate	Result(ppbv)	True(ppbv)	%Recovery	Limits %
4-Bromofluorobenzene	9.50	10.00	95	70 - 130

(NO 'U' IN FIELD) = COMPOUND DETECTED AT REPORTED CONCENTRATION IN PPBV AND UG/M3.
U= UNDETECTED

D = DILUTED. REPORTED FROM DILUTION RUN. VALUE IS ACCURATE.
B= DETECTED IN BLANK

E = ESTIMATED CONCENTRATION. EXCEEDED CALIBRATION LIMIT.
J= DETECTED BELOW PRACTICAL QUANTITATION LEVEL, BUT ABOVE MDL

VOLATILE ORGANICS DATA ANALYSIS SUMMARY
EPA COMPENDIUM TO-15

Lab Name:	EMSL ANALYTICAL	Air Results for Project:	EMSL 280701955
Lab City:	WESTMONT, NJ	Field ID Number:	PLAYROOM
Instrument ID:	5972-VOA#4	Laboratory ID Number:	280701955-4
GC Column:	RTX-502.2 60m 0.25mm 1.4u	Sampling Date:	10/29/07
Acquisition Method:	101207TOM	Lab File ID:	J6614.d
Calibration Date:	10/12/07	Analysis Date:	11/06/07
Matrix:	Air	Time Acquired:	1:17
Latest MDL Date:	7/13/07	Sample Volume(mL):	250
Analyst:	MTH	Dilution Factor:	1
		Can ID:	T1999

Compound	CAS Number	Molecular Weight	Results ppbv	Q	Results ug/m3	
Propylene	115-07-1	42	1.0	U	1.7	
Freon 12(Dichlorodifluoromethane)	75-71-8	121	0.50	U	2.5	
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	171	0.50	U	3.5	
Chloromethane	74-87-3	50	0.73		1.5	
Vinyl chloride	75-01-4	63	0.50	U	1.3	
1,3-Butadiene	106-99-0	54	0.50	U	1.1	
Bromomethane	74-83-9	95	0.50	U	1.9	
Chloroethane	75-00-3	65	0.50	U	1.3	
Ethanol	64-17-5	46	514	D,E	740	
Bromoethene (Vinyl bromide)	593-60-2	107	0.50	U	2.2	
Freon 11(Trichlorofluoromethane)	75-69-4	137	0.50	U	2.8	
Isopropyl alcohol(2-Propanol)	67-63-0	60	6.9		17	
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	187	0.50	U	3.8	
Acetone	67-64-1	58	42	D	96	
1,1-Dichloroethene	75-35-4	97	0.50	U	2.0	
Acetonitrile	75-05-8	41	0.50	U	0.84	
Tertiary butyl alcohol (TBA)	75-65-0	74	0.50	U	1.5	
Bromoethane (Ethyl bromide)	74-96-4	108	0.50	U	2.2	
3-Chloropropene (Allyl chloride)	107-05-1	77	0.50	U	1.6	
Carbon disulfide	75-15-0	76	0.50	U	1.6	
Methylene chloride	75-09-2	85	1.5	U	5.2	
Acrylonitrile	107-13-1	53	0.50	U	1.1	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88	0.50	U	1.8	
trans-1,2-Dichloroethene	156-60-5	97	0.50	U	2.0	
n-Hexane	110-54-3	86	1.0		3.5	
1,1-Dichloroethane	75-34-3	99	0.50	U	2.0	
Vinyl acetate	108-05-4	86	0.50	U	1.8	
2-Butanone(MEK)	78-93-3	72	1.4		4.1	
cis-1,2-Dichloroethene	156-59-2	97	0.50	U	2.0	
Ethyl acetate	141-78-6	88	0.51		1.8	
Chloroform	67-66-3	119	0.50	U	2.4	
Tetrahydrofuran	109-99-9	72	0.50	U	1.5	
1,1,1-Trichloroethane	71-55-6	133	0.50	U	2.7	
Cyclohexane	110-82-7	84	0.50	U	1.7	
2,2,4-Trimethylpentane (Isooctane)	540-84-1	114	0.50	U	2.3	
Carbon tetrachloride	56-23-5	154	0.50	U	3.1	
n-Heptane	142-82-5	100	0.50	U	2.0	
1,2-Dichloroethane	107-06-2	99	0.50	U	2.0	
Benzene	71-43-2	78	0.70		2.2	
Trichloroethene	79-01-6	131	0.50	U	2.7	
1,2-Dichloropropane	78-87-5	113	0.50	U	2.3	
Bromodichloromethane	75-27-4	164	0.50	U	3.3	
1,4-Dioxane	123-91-1	88	0.50	U	1.8	
4-Methyl-2-pentanone(MIBK)	108-10-1	100	0.50	U	2.0	
cis-1,3-Dichloropropene	10061-01-5	111	0.50	U	2.3	
Toluene	108-88-3	92	4.8		18	

VOLATILE ORGANICS DATA ANALYSIS SUMMARY
EPA COMPENDIUM TO-15

Lab Name:	EMSL ANALYTICAL	Air Results for Project:	EMSL 280701955
Lab City:	WESTMONT, NJ	Field ID Number:	PLAYROOM
Instrument ID:	5972-VOA#4	Laboratory ID Number:	280701955-4
GC Column:	RTX-502.2 60m 0.25mm 1.4u	Sampling Date:	10/29/07
Acquisition Method:	101207T.O.M	Lab File ID:	j6614.d
Calibration Date:	10/12/07	Analysis Date:	11/06/07
Matrix:	Air	Time Acquired:	1:17
Latest MDL Date:	7/13/07	Sample Volume(mL):	250
Analyst:	MTH	Dilution Factor:	1
		Can ID:	T1999

Compound	CAS Number	Molecular Weight	Results ppbv	Q	Results ug/m3	
trans-1,3-Dichloropropene	10061-02-6	111	0.50	U	2.3	
1,1,2-Trichloroethane	79-00-5	133	0.50	U	2.7	
2-Hexanone(MBK)	591-78-6	100	0.50	U	2.0	
Tetrachloroethene	127-18-4	166	0.50	U	3.4	
Dibromochloromethane	124-48-1	208	0.50	U	4.3	
1,2-Dibromoethane	106-93-4	188	0.50	U	3.8	
Chlorobenzene	108-90-7	113	0.50	U	2.3	
Ethylbenzene	100-41-4	106	1.6		7.0	
Xylene (para & meta)	1330-20-7	106	5.2		23	
Xylene (Ortho)	95-47-6	106	2.3		10	
Styrene	100-42-5	104	0.80		3.4	
Bromoform	75-25-2	253	0.50	U	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	168	0.50	U	3.4	
4-Ethyltoluene	622-96-8	120	0.83		4.1	
1,3,5-Trimethylbenzene	108-67-8	120	0.50	U	2.5	
2-Chlorotoluene	95-49-8	127	0.50	U	2.6	
1,2,4-Trimethylbenzene	95-63-6	120	1.5		7.4	
1,3-Dichlorobenzene	541-73-1	147	0.50	U	3.0	
1,4-Dichlorobenzene	106-46-7	147	0.50	U	3.0	
Benzyl chloride	100-44-7	179	0.50	U	3.7	
1,2-Dichlorobenzene	95-50-1	147	0.50	U	3.0	
1,2,4-Trichlorobenzene	120-82-1	182	0.50	U	3.7	
Hexachloro-1,3-butadiene	87-68-3	261	0.50	U	5.3	

Surrogate	Result(ppbv)	True(ppbv)	%Recovery	Limits %
4-Bromofluorobenzene	10.09	10.00	101	70 - 130

(NO 'U' IN FIELD) = COMPOUND DETECTED AT REPORTED CONCENTRATION IN PPBV AND UG/M3.

U= UNDETECTED

D = DILUTED. REPORTED FROM DILUTION RUN. VALUE IS ACCURATE.

B= DETECTED IN BLANK

E = ESTIMATED CONCENTRATION. EXCEEDED CALIBRATION LIMIT.

J= DETECTED BELOW PRACTICAL QUANTITATION LEVEL, BUT ABOVE MDL

VOLATILE ORGANICS DATA ANALYSIS SUMMARY
EPA COMPENDIUM TO-15

Lab Name: EMSL ANALYTICAL
Lab City: WESTMONT, NJ
Instrument ID: 5972-VOA#4
GC Column: RTX-502.2 60m 0.25mm 1.4u
Acquisition Method: 101207TOM
Calibration Date: 10/12/07
Matrix: Air
Latest MDL Date: 7/13/07
Analyst: MTH

Air Results for Project: EMSL 280701955
Field ID Number: OUSIDE AIR
Laboratory ID Number: 280701955-5
Sampling Date: 10/29/07
Lab File ID: j6615.d
Analysis Date: 11/06/07
Time Acquired: 2:08
Sample Volume(mL): 250
Dilution Factor: 1
Can ID: T1904

Compound	CAS Number	Molecular Weight	Results ppbv	Q	Results ug/m3
Propylene	115-07-1	42	1.0	U	1.7
Freon 12(Dichlorodifluoromethane)	75-71-8	121	0.50	U	2.5
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	171	0.50	U	3.5
Chloromethane	74-87-3	50	0.50	U	1.0
Vinyl chloride	75-01-4	63	0.50	U	1.3
1,3-Butadiene	106-99-0	54	0.50	U	1.1
Bromomethane	74-83-9	95	0.50	U	1.9
Chloroethane	75-00-3	65	0.50	U	1.3
Ethanol	64-17-5	46	2.7		5.1
Bromoethene (Vinyl bromide)	593-60-2	107	0.50	U	2.2
Freon 11(Trichlorofluoromethane)	75-69-4	137	0.50	U	2.8
Isopropyl alcohol(2-Propanol)	67-63-0	60	1.5	U	3.7
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	187	0.50	U	3.8
Acetone	67-64-1	58	3.0	U	7.1
1,1-Dichloroethene	75-35-4	97	0.50	U	2.0
Acetonitrile	75-05-8	41	0.50	U	0.84
Tertiary butyl alcohol (TBA)	75-65-0	74	0.50	U	1.5
Bromoethane (Ethyl bromide)	74-96-4	108	0.50	U	2.2
3-Chloropropene (Allyl chloride)	107-05-1	77	0.50	U	1.6
Carbon disulfide	75-15-0	76	0.50	U	1.6
Methylene chloride	75-09-2	85	1.5	U	5.2
Acrylonitrile	107-13-1	53	0.50	U	1.1
Methyl-tert-butyl ether(MTBE)	1634-04-4	88	0.50	U	1.8
trans-1,2-Dichloroethene	156-60-5	97	0.50	U	2.0
n-Hexane	110-54-3	86	0.50	U	1.8
1,1-Dichloroethane	75-34-3	99	0.50	U	2.0
Vinyl acetate	108-05-4	86	0.50	U	1.8
2-Butanone(MEK)	78-93-3	72	0.50	U	1.5
cis-1,2-Dichloroethene	156-59-2	97	0.50	U	2.0
Ethyl acetate	141-78-6	88	0.50	U	1.8
Chloroform	67-66-3	119	0.50	U	2.4
Tetrahydrofuran	109-99-9	72	0.50	U	1.5
1,1,1-Trichloroethane	71-55-6	133	0.50	U	2.7
Cyclohexane	110-82-7	84	0.50	U	1.7
2,2,4-Trimethylpentane (Isooctane)	540-84-1	114	0.50	U	2.3
Carbon tetrachloride	56-23-5	154	0.50	U	3.1
n-Heptane	142-82-5	100	0.50	U	2.0
1,2-Dichloroethane	107-06-2	99	0.50	U	2.0
Benzene	71-43-2	78	0.50	U	1.6
Trichloroethene	79-01-6	131	0.50	U	2.7
1,2-Dichloropropane	78-87-5	113	0.50	U	2.3
Bromodichloromethane	75-27-4	164	0.50	U	3.3
1,4-Dioxane	123-91-1	88	0.50	U	1.8
4-Methyl-2-pentanone(MIBK)	108-10-1	100	0.50	U	2.0
cis-1,3-Dichloropropene	10061-01-5	111	0.50	U	2.3
Toluene	108-88-3	92	0.50	U	1.9

VOLATILE ORGANICS DATA ANALYSIS SUMMARY
EPA COMPENDIUM TO-15

Lab Name: EMSL ANALYTICAL
Lab City: WESTMONT, NJ
Instrument ID: 5972-VOA#4
GC Column: RTX-502.2 60m 0.25mm 1.4u
Acquisition Method: 101207TO.M
Calibration Date: 10/12/07
Matrix: Air
Latest MDL Date: 7/13/07
Analyst: MTH

Air Results for Project: EMSL 280701955
Field ID Number: OUSIDE AIR
Laboratory ID Number: 280701955-5
Sampling Date: 10/29/07
Lab File ID: j6615.d
Analysis Date: 11/06/07
Time Acquired: 2:08
Sample Volume(mL): 250
Dilution Factor: 1
Can ID: T1904

Compound	CAS Number	Molecular Weight	Results ppbv	Q	Results ug/m3	
trans-1,3-Dichloropropene	10061-02-6	111	0.50	U	2.3	
1,1,2-Trichloroethane	79-00-5	133	0.50	U	2.7	
2-Hexanone(MBK)	591-78-6	100	0.50	U	2.0	
Tetrachloroethene	127-18-4	166	0.50	U	3.4	
Dibromochloromethane	124-48-1	208	0.50	U	4.3	
1,2-Dibromoethane	106-93-4	188	0.50	U	3.8	
Chlorobenzene	108-90-7	113	0.50	U	2.3	
Ethylbenzene	100-41-4	106	0.50	U	2.2	
Xylene (para & meta)	1330-20-7	106	0.50	U	2.2	
Xylene (Ortho)	95-47-6	106	0.50	U	2.2	
Styrene	100-42-5	104	0.50	U	2.1	
Bromoform	75-25-2	253	0.50	U	5.2	
1,1,2,2-Tetrachloroethane	79-34-5	168	0.50	U	3.4	
4-Ethyltoluene	622-96-8	120	0.50	U	2.5	
1,3,5-Trimethylbenzene	108-67-8	120	0.50	U	2.5	
2-Chlorotoluene	95-49-8	127	0.50	U	2.6	
1,2,4-Trimethylbenzene	95-63-6	120	0.50	U	2.5	
1,3-Dichlorobenzene	541-73-1	147	0.50	U	3.0	
1,4-Dichlorobenzene	106-46-7	147	0.50	U	3.0	
Benzyl chloride	100-44-7	179	0.50	U	3.7	
1,2-Dichlorobenzene	95-50-1	147	0.50	U	3.0	
1,2,4-Trichlorobenzene	120-82-1	182	0.50	U	3.7	
Hexachloro-1,3-butadiene	87-68-3	261	0.50	U	5.3	

Surrogate	Result(ppbv)	True(ppbv)	%Recovery	Limits %
4-Bromofluorobenzene	8.97	10.00	90	70 - 130

(NO 'U' IN FIELD) = COMPOUND DETECTED AT REPORTED CONCENTRATION IN PPBV AND UG/M3.

U= UNDETECTED

D = DILUTED, REPORTED FROM DILUTION RUN. VALUE IS ACCURATE.

B= DETECTED IN BLANK

E = ESTIMATED CONCENTRATION, EXCEEDED CALIBRATION LIMIT.

J= DETECTED BELOW PRACTICAL QUANTITATION LEVEL, BUT ABOVE MDL

EMSL ANALYTICAL, INC.
107 Haddon Avenue
Westmont, New Jersey 08108
856-858-4800 Extension 1301
856-858-3502 Fax or
mhowley@emsl.com or svanetten@emsl.com

External

EMSL Project # 28070/1955
PO#

Chain of Custody / Analysis Request Form

Note: Please complete all required information. Incomplete shaded areas may hinder processing samples.

Project Name:

(Weather conditions (if known): Bar. Pressure:

Temp.: 53 % Humidity:

Custody and Sample Information - Print ALL information. Write N/A in blanks not applicable.

1. Report to: <u>Rohit Bali</u> <u>9001 Glenwood Ave</u> <u>Raleigh NC 27617</u>	2. Bill To: <u>Same as 1</u>	Contact Person Name: <u>Rohit Bali</u> E-mail: <u>rbali@emsl.milled.com</u> Tel #: <u>919-801-9910</u> FAX #: <u>919-801-9911</u>	Sample Shipping and Transport Notice <small>The individual signing this document to relinquish the sample(s) is indicating that the sample(s) is/are being shipped in compliance with all applicable local, state or Federal as well as international laws, regulations and ordinances. EMSL Analytical, Inc. assumes no liability, with respect to sampling, handling or shipping of the samples included in this shipment. The relinquishing signature in addition indicates agreement to hold harmless, defend and indemnify EMSL Analytical, Inc. against any claim, demand, or action, related to the sampling, handling, or shipping of samples. Call the DOT Hotline at (800) 467-4922 for questions about regulations.</small>
---	---------------------------------	---	---

3. Sampled by (Signature) <u>Rohit Bali</u>			4. # of Samples in Shipment <u>5</u>		5. Date of Sample Shipment <u>10-29-07</u>		6. Date/Time Results Needed					
Item #	Lab Sample ID	Canister ID	Client Sample ID	Sampling Date / Time Start	Sampling Date / Time Stop	Regulator ID	Analyses Requested	Field Test Values (ppm)	Canister / Vacuum Initial "Hg	Final "Hg	Receipt "Hg	
1		<u>T2156</u>	<u>Kitchen</u>	<u>10-29-07 8:56</u>	<u>10-29-07 4:44</u>	<u>7296356</u>	<u>TO-15</u>		<u>-30</u>	<u>-4</u>	<u>-0.3</u>	
2		<u>T1211</u>	<u>Take's Room</u>	<u>10-29-07 9:01</u>	<u>10-29-07 4:50</u>	<u>7298241</u>			<u>-30</u>	<u>-2</u>	<u>-0.5</u>	
3		<u>T2130</u>	<u>Garage</u>	<u>10-29-07 9:04</u>	<u>10-29-07 4:55</u>	<u>7289040</u>			<u>-30</u>	<u>-2</u>	<u>-2.2</u>	
4		<u>T1999</u>	<u>Playroom</u>	<u>10-29-07 8:59</u>	<u>10-29-07 4:50</u>	<u>7296094</u>			<u>-30</u>	<u>-2</u>	<u>-0.4</u>	
5												
6												

Sample Type: ☒ Indoor Air Quality ☐ Soil Gas ☐ Vent Gas ☐ Other _____

Do you want your results e-mailed?

Library Search needed: ☐ Yes ☒ No, required if you will need help interpreting your report.

☒ Yes ☐ No

Relinquished by (print/sign): <u>Keith Russell</u>	Company: <u>EMSL</u>	Date/Time <u>10/23/07 1515</u>	Affixed Custody Seal No. <u>1657</u>
Received by (print/sign): <u>Rohit Bali</u>	Company: <u>ECS</u>	Date/Time <u>10/29/07 1800</u>	Was Custody Seal Broken? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Relinquished by (print/sign): <u>Rohit Bali</u>	Company: <u>ECS</u>	Date/Time <u>10/29/07 1800</u>	Affixed Custody Seal No. <u>1580 1581</u>
Received by (print/sign): <u>DM-fx-9300</u>	Company: <u>EMSL</u>	Date/Time	Was Custody Seal Broken? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Relinquished by (print/sign):	Company:	Date/Time	Affixed Custody Seal No.
Received by (print/sign):	Company:	Date/Time	Was Custody Seal Broken? <input type="checkbox"/> Yes <input type="checkbox"/> No
Relinquished by (print/sign):	Company:	Date/Time	Affixed Custody Seal No.
Received by (print/sign): <u>Keith Russell</u>	Company: <u>EMSL</u>	Date/Time <u>10/31/07 1015</u>	Was Custody Seal Broken? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Please indicate Turn ☒ Standard 5-10 Days* ☐ *96-Hour ☐ *72- ☐ *48-Hour ☐ *24-Hour

Around Time needed: *TAT subject to laboratory workload. A limited amount of 5 day TAT can be accepted by laboratory

Comments:	Please indicate reporting requirements:	
	1) Results only	2) Other (Attach a copy of requirements)

EMSL ANALYTICAL, INC.
 107 Haddon Avenue
 Westmont, New Jersey 08108
 856-858-4800 Extension 1301
 856-858-3502 Fax or
 mhowley@emsl.com or svanetten@emsl.com

External

EMSL Project # 286701955
 PO#

Chain of Custody / Analysis Request Form

Note: Please complete all required information. Incomplete shaded areas may hinder processing samples.

Project Name:

(Weather conditions (if known): Bar. Pressure:

Temp.:

% Humidity:

Custody and Sample Information - Print ALL information. Write N/A in blanks not applicable.

1. Report to: <u>Robert Bali</u> <u>9001 Glenwood Ave</u> <u>Raleigh NC 27617</u>				2. Bill To: <u>same as 1</u>				Contact Person Name: <u>Robert Bali</u> E-mail: <u>rbali@emslimited.com</u> Tel#: <u>919-861-9910</u> FAX #: <u>919-861-9911</u>				Sample Shipping and Transport Notice <small>The individual signing this document to relinquish the sample is indicating that the sample is being shipped in compliance with all applicable local, state or Federal, as well as international laws, regulations and ordinances. EMSL Analytical, Inc. assumes no liability with respect to sampling, handling or shipping of the samples included in this shipment. The relinquishing signature in addition indicates agreement to hold harmless, defend and indemnify EMSL Analytical, Inc. against any claim, demand, or action, related to the sampling, handling or shipping of samples. Call the DOT Hotline at 1-800-467-4922 for questions about regulations.</small>			
3. Sampled by (Signature) <u>Robert Bali</u>				4. # of Samples in Shipment <u>5</u>				5. Date of Sample Shipment <u>10-29-07</u>				6. Date/Time Results Needed <u>11-2-07 5:00PM</u>			
Item #	Lab Sample ID	Canister ID	Client Sample ID	Sampling Date / Time		Sampling Date / Time		Regulator ID	Analyses Requested	Field Test Values (ppm)	Initial "Hg	Final "Hg	Receipt "Hg		
1		<u>T1904</u>	<u>Outside Air</u>	<u>10-29-07</u>	<u>9:15</u>	<u>10-29-07</u>	<u>5:00</u>	<u>7296222</u>	<u>TO-15</u>		<u>-30</u>	<u>-2</u>	<u>0</u>		
2															
3															
4															
5															
6															
Sample Type: <input checked="" type="checkbox"/> Indoor Air Quality <input type="checkbox"/> Soil Gas <input type="checkbox"/> Vent Gas <input type="checkbox"/> Other _____										Do you want your results e-mailed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Library Search needed: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No, required if you will need help interpreting your report.															
Relinquished by (print/sign): <u>Keith Russell</u>				Company: <u>EMSL</u>				Date/Time: <u>10/25/07 1625</u>		Affixed Custody Seal No. <u>1956</u>					
Received by (print/sign): <u>Robert Bali</u>				Company: <u>ECS</u>				Date/Time: <u>10/29/07 1500</u>		Was Custody Seal Broken? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Relinquished by (print/sign): <u>Robert Bali</u>				Company: <u>ECS</u>				Date/Time: <u>10/29/07 1500</u>		Affixed Custody Seal No. <u>1580, 1581</u>					
Received by (print/sign): <u>OM-FX-930A</u>				Company: <u>EMSL</u>				Date/Time:		Was Custody Seal Broken? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Relinquished by (print/sign):				Company:				Date/Time:		Affixed Custody Seal No.					
Received by (print/sign):				Company:				Date/Time:		Was Custody Seal Broken? <input type="checkbox"/> Yes <input type="checkbox"/> No					
Relinquished by (print/sign):				Company:				Date/Time:		Affixed Custody Seal No.					
Received by (print/sign): <u>Keith Russell</u>				Company: <u>EMSL</u>				Date/Time: <u>10/31/07 1015</u>		Was Custody Seal Broken? <input type="checkbox"/> Yes <input type="checkbox"/> No					
Please indicate Turn Around Time needed: <input checked="" type="checkbox"/> Standard 5-10 Days* <input type="checkbox"/> 96-Hour <input type="checkbox"/> 72-Hour <input type="checkbox"/> 48-Hour <input type="checkbox"/> 24-Hour															
*TAT subject to laboratory workload. A limited amount of 5 day TAT can be accepted by laboratory															
Comments:				Please indicate reporting requirements:											
				1) Results only <input type="checkbox"/> 2) Other (Attach a copy of requirements) <input type="checkbox"/>											

Appendix II

State of North Carolina Letter



North Carolina Department of Environment and Natural Resources

R. Matthews, Director

Division of Waste Management

Michael F. Easley, Governor

William G. Ross Jr., Secretary

October 22, 2007

Ms. Rosemary Skalka
Director of Customer Service
KB Homes
2610 Wycliff Road Suite 102
Raleigh, NC 27607

RE: Assessment of 223 Rope Walk Court
Morrisville, Wake County

Ms. Skalka:

I have reviewed ECS Carolinas' October 15, 2007 Phase I Remedial Investigation Report ("Report") of the Knichel residence at 223 Rope Walk Court ("Site"). Only one soil sample (AOC1-6) of the five areas of concern contained xylene at elevated concentrations. This sample contained a total xylene concentration of 77 mg/kg or parts per million in soil. This sample result is below the Inactive Hazardous Sites Branch ("Branch") health-based remediation goal for unrestricted use, but exceeds twenty (20) times the NCAC 2L groundwater standard for xylene.

Therefore, KB Homes must advance a soil boring from ground surface to the water table in the vicinity of AOC1-6 to confirm this contaminant has not entered groundwater. Soil samples must be collected every five feet from ground surface to the water table and each soil sample shall be analyzed for volatile organic compounds (VOCs) by US EPA Method 8260. The boring should be completed into a monitoring well and one groundwater sample must be collected and analyzed for VOCs by USEPA 8260. This sample should be collected through a geoprobe if possible to minimize the amount of soil cuttings. Any soil cuttings or purge water shall be containerized and held until the groundwater/soil samples are analyzed.

In addition to the soil sampling, ECS also conducted indoor air ("air") monitoring at the Site residence. The air sample results were found to be below the US EPA action levels for each contaminant detected in samples collected from the kitchen and garage. Although, the Report from ECS indicates that various action levels or ranges (see page 5 of 9 of the Report) exist for VOCs in new buildings, the action level that the Branch uses is the toxic action level. For xylene that action level is 7000 ug/cubic meter. However, since other VOCs are present in the sample that affect human target organs the same as xylene, the concentrations of these compounds and their action levels must be adjusted to determine a final action level for each sample collected. That action level for xylene is 1400 ug/cubic meter for the kitchen sample and 1750 ug/cubic meter for the garage sample. When these final

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Phone 919-733-4996 \ FAX 919-715-3605 \ Internet <http://wastenotnc.org>
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October 22, 2007

Assessment 223 Rope Walk Court

action levels are compared to the air sample results from the kitchen and garage, all contaminants of concern are below action levels.

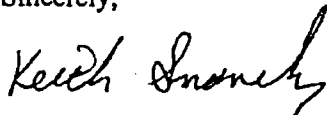
Even though the air sample results indicate that xylene is below action levels, a second indoor air sampling event must be conducted. The air samples from this second event will provide additional data to determine if the VOCs detected are remaining nearly consistent. These indoor air results do not necessarily indicate that the elevated xylenes came from the xylene driveway cleanup only but show a combination of VOCs existing in the house prior to and during the tests. These VOCs can result from off-gasing of carpeting from new homes, paints and varnishes, and VOCs from gasoline cans.

To be consistent with the first indoor air tests, similar tests should be conducted in the kitchen and garage for a second sampling event. ECS must also collect additional samples in the upstairs bedrooms.

Please provide a brief work plan for review and approval prior to conducting this Phase II work at the Site. The work plan should include a brief description of the installation of the soil boring and the second air sampling event. Since the residents have been temporarily relocated, and wish to return home, please submit the brief plan for conducting the air sampling so the testing can begin as soon as possible. In addition to the tasks above, please submit a copy of the MSDS sheet for the compound used on the driveway at the Site and the soil sample results and manifest(s) for the disposal of soil removed from the Site and stored at the Yard Nique property.

If you have any questions, I can be reached at (919) 508-8479.

Sincerely,



Keith Snavelly, Hydrogeologist
Inactive Hazardous Sites Branch
Superfund Section

cc: Ryan Conchilla, ECS
Mark Brown, ECS
Stephanie Knichel, 223 Rope Walk Court

Snavely, Keith

From: Cathy Cralle Jones [cathy@attybryanbrice.com]
Sent: Thursday, December 06, 2007 4:38 PM
To: Keith Snavely
Subject: RE: Knichel: File Review and

Thanks!

Cathy

-----Original Message-----

From: Keith Snavely [mailto:Keith.Snavely@ncmail.net]
Sent: Thursday, December 06, 2007 4:23 PM
To: Cathy Cralle Jones
Subject: Re: Knichel: File Review and

Cathy,

I will let you know when the reports are in for the 20 sites and the final sampling report from the Knichels.

Keith

Cathy Cralle Jones wrote:

>
> Keith -
>
> I came over today to look at the Knichel file. Thanks for having that
> all together for me. I did note ECS was planning to have their report
> on the 20 sites submitted shortly, but it looks like it hasn't come in

> yet. Would you please shoot me an email when that comes in? I would
> really like to get a copy of that and will come down to get that when
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> Thanks so much,
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> Cathy
>
> Catherine Cralle Jones, Esq.
>
> Law Office of F. Bryan Brice, Jr.
>
> 19 W. Hargett St., Suite 600
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> Raleigh, NC 27601
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> (919) 754-1600
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Snavely, Keith

From: Cathy Cralle Jones [cathy@attybryanbrice.com]
Sent: Thursday, December 06, 2007 12:59 PM
To: Keith Snavely
Subject: Knichel: File Review and

Keith –

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Snavely, Keith

From: SMBrown [SMBrown@ecslimited.com]
Sent: Monday, November 26, 2007 12:05 PM
To: <keith.snavely@ncmail.net>
Cc: Dunn, Glenn; Cope, Travis; RConchilla; Skalko, Barry
Subject: Twin Lakes Subdivision

Mr. Snavely;

You might have already been informed but I wanted to briefly update you on the status of the Twin Lakes (xylene) Project in Morrisville.

- 1) ECS has submitted the Phase I soil samples for the 20 additional Twin Lakes sites to our analytical laboratory. Each parcel address has been assigned a unique Area of Concern (AOC) number. Samples collected and analyzed from each AOC will also be identified with a unique number (e.g., AOC8-1, AOC8-2, etc.).
- 2) We have begun compiling our Twin Lakes Subdivision report (similar in format to the H&H Ltd report) and plan to submit preliminary information to you within the first two weeks of December. Our plan is to compile and submit one report for all 20 sites with sampling locations and sample results for each individual AOC depicted on a separate figure in the Appendix. We plan to depict the sample locations and results on surveyed plats obtained from Wake County and will include long/lat data collected via portable GPS units.
- 3) We returned to the Knichel site in a second attempt to collect a groundwater sample. After encountering refusal at approximately 13 feet below the ground surface, it is my understanding that Ryan Conchilla contacted you and you indicated that, due to the very dry subsurface conditions encountered, a groundwater sample would not be required at that residence.
- 4) Because some of the irrigation lines are not working and as a precaution against exposure, KB Home (KB) plans to remove some of the soils. It is their plan to excavate and replace approximately 12-18 inches of the existing soils along the driveways and in and near AOCs in other areas of the parcel with elevated VOC levels. ECS will provide field personnel equipped with a photo-ionization detector (PID) to field screen the soils to ensure we remove elevated soils identified by the PID. The plan is to replace the lines and areas around AOCs, backfill with off-site borrow soils, and install new sod. We have suggested that, until we have sample results, KB consider using HAZWOPER-certified contractors to excavate and stockpile the sod and soils in a secure area away from the residences. In the proposed stockpile area, we will line the existing ground surface and cover and secure the soils with 6-mil plastic and straw bales until we have stockpile characterization sample results. The stockpile will be located away from the residences in a secure area cordoned off by snow fence or silt fence. As sample results come in, we plan to quantify those soils that can be disposed in a Subtitle D Landfill, Subtitle C Landfill or require transport to a treatment facility for treatment or incineration.
- 5) To reduce the amount of disruption, KB representatives plan to advise the residents of our construction schedule and precautions which are advisable during the operation.

Please contact me at your convenience as KB would like to begin construction at several of the sites the week of November 26th.

Thanks
Mark

Mark Brown, LG, PG, RSM
Principal Geologist

Environmental Services Department Manager
9001 Glenwood Avenue
Raleigh, NC 27617

919.861.9910 (Switchboard)
919.861.9861 (Direct)
919.861.9911 (Fax)
919.291.9200 (Cell)

www.ecslimited.com

"If you find a problem, it probably doesn't exist."
-Frank A. Clark

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Snavely, Keith

From: Keith Snavely [Keith.Snavely@ncmail.net]
Sent: Tuesday, November 20, 2007 3:52 PM
To: Cathy Cralle Jones
Subject: Re: Morrisville - Xylene Contamination (Knichel Residence)

Cathy,

I just called Ron Conchilla from ESC. He was not sure if they would have the report done and in our office by Thursday 29th. However, he did let me know verbally that he just received the soil results from the soil boring in the area of the elevated soil sample. All the soil samples down to auger refusal or near bedrock were below detection limit for volatiles including xylene. In addition, the second round of air sampling in the Knichel residence did not indicate any elevated volatile levels of concern. Ron indicated that the assessment on the 20 homes in Twin Lakes would not be done by next week- but maybe by the end of first week in December. I also spoke to Rosemary Scalka with KB Homes. KB Homes will contact Stephanie Knichel so yard repair can begin promptly.

I will be on vacation from November 28 through December 5 and will return to the office on 6th of December. If you need to check to see if the Knichel report is in by the end of next week, please contact my supervisor John Walch at (919) 508-8485. He is familiar with the status of the project and can give you an update.

Thanks for your patience and the patience of the Knichels.

Keith

Cathy Cralle Jones wrote:

> Keith, Thanks. I think I'll schedule an appointment with Scott Ross
> to come review the file next Thursday (Nov. 29th). That may be enough
> time to get the Phase II in the file as well so I can get it all in one shot.
> Thanks, Cathy

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>

> -----Original Message-----

> From: Keith Snavely [mailto:Keith.Snavely@ncmail.net]
> Sent: Monday, November 19, 2007 1:55 PM
> To: Cathy Cralle Jones
> Subject: Re: Morrisville - Xylene Contamination (Knichel Residence)

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> Cathy,

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> ESC today to get an update. But, I am expecting some results by next
> week. This will include the results from the Phase II follow-up soil
> samples collected in the area where one sample was found to exceed the
> protection of groundwater standards for xylene. In addition, the Phase
> II report(s) will include the analytical results from sampling soil
> for xylene around the driveways from 20 homes in the Twin Lakes
> Subdivision and the results of the second phase of air samples
> collected from the Knichell residence.

>

> The Phase I report of the soil and air sampling as well as the work
> plans for the Phase I and Phase II assessment are available for review

> in our file Superfund File room. The Phase I Assessment is just over
> 100
>
> pages (includes the soil assessment and air testing results) if you
> need
>
> to copy it. If you want to review this material call Scott Ross at
> 508-8475. I will let you know when I receive the Phase II information.
>
> Keith.
>
>
>
>
>

Snavely, Keith

From: Cathy Cralle Jones [cathy@attybryanbrice.com]
Sent: Tuesday, November 20, 2007 9:41 AM
To: Keith Snavely
Cc: Bryan Brice
Subject: RE: Morrisville - Xylene Contamination (Knichel Residence)

Keith, Thanks. I think I'll schedule an appointment with Scott Ross to come review the file next Thursday (Nov. 29th). That may be enough time to get the Phase II in the file as well so I can get it all in one shot.

Thanks, Cathy

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To: Cathy Cralle Jones
Subject: Re: Morrisville - Xylene Contamination (Knichel Residence)

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Keith.

Snavely, Keith

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Subject: Re: Morrisville - Xylene Contamination (Knichel Residence)

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> Catherine Cralle Jones, Esq.
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> -----Original Message-----
> From: Cathy Cralle Jones

> Sent: Wednesday, November 14, 2007 2:51 PM
> To: 'Keith Snavelly'
> Cc: Bryan Brice
> Subject: RE: Morrisville - Xylene Contamination (Knichel Residence)
>
> Keith -- Thanks so much for the detailed update. I would like to get a
> copy of the reports you have received today and of the report from the
> 20 additional homes when that becomes available. What's the best way
> of getting that? Shall I come down to review and copy the file or is
> it something that you can easily copy or fax?
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> Thanks again,
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> Cathy
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> -----Original Message-----
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> From: Keith Snavelly [mailto:Keith.Snavely@ncmail.net]
>
> Sent: Wednesday, November 14, 2007 2:12 PM
>
> To: Cathy Cralle Jones
>
> Subject: Re: Morrisville - Xylene Contamination (Knichel Residence)
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> Kathy,
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> Their was only one area outside the house where follow-up work was
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> Cathy Cralle Jones wrote:
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Snavely, Keith

From: Cathy Cralle Jones [cathy@attybryanbrice.com]
Sent: Monday, November 19, 2007 12:35 PM
To: <keith.snavely@ncmail.net>
Cc: Bryan Brice
Subject: Morrisville - Xylene Contamination (Knichel Residence)

DATE FILE

Keith -- Is there a good time for me to come down to your office to review the file re the (Knichel) Xylene release? Thanks, Cathy

Catherine Cralle Jones, Esq.
Law Office of F. Bryan Brice, Jr.
19 W. Hargett St., Suite 600
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Snavely, Keith

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Sent: Wednesday, November 14, 2007 2:57 PM
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Snavely, Keith

From: Keith Snavely [Keith.Snavely@ncmail.net]
Sent: Wednesday, November 14, 2007 2:12 PM
To: Cathy Cralle Jones
Subject: Re: Morrisville - Xylene Contamination (Knichel Residence)

MAIL FILE

Kathy,

There was only one area outside the house where follow-up work was conducted. That was in the area left of the driveway (as you indicated) where one soil sample was elevated for xylene but within the cleanup level for unrestricted use but exceeded the protection to groundwater standard for xylene. We used a geoprobe rig to collect soil samples down to the water table and then planned on collecting and analyzing a groundwater sample to make sure there have been no impacts to groundwater. The geoprobe was not able to reach groundwater, so we used an auger rig. This morning the geologist with ECS Ltd, the consultants for KB Homes, indicated to me that with the auger rig they reached refusal at 13 feet below ground surface and were not able to reach groundwater. Therefore, the drilling has ceased and we will wait on the soil samples results to determine if any further evaluation of soil/groundwater is needed. Since the soil at the base of the auger boring was dry and no (xylene) odor was present, our hopes are that the soil samples will reflect the same results. If there are concentrations of xylene in soil that increase with depth, we will have to evaluate further our need for a groundwater sample to be collected from the property.

As far as the air sampling conducted in the house. There were some elevated levels of xylenes collected as well as ethanol and some low level gasoline type products detected from the first sampling event.

They were all below the action levels for no further sampling. However, I did request KB Homes collect a second round of air samples including both bedrooms upstairs. I haven't received those results as of yet.

ESC Ltd also collected 4 to 6 soil samples at 20 other homes in the Twin Lakes subdivision that KB Homes was concerned about. That sampling has been completed. According to the geologist he did not detect strong odors in any of those samples.

A report or reports that will include the data from the Knichel's residence (soil samples and air testing) and soil results from the 20 other homes in the area will be completed soon. I will find out if there have been any updates from the recent sample results and update you before the final report is completed.

Keith

Cathy Cralle Jones wrote:

>
> Keith,
>
> Could you update me on where this matter stands from your perspective?
> Has there been any testing done other than that at the Knichel's? (You
> told me before that there was a hot spot just to the left of the
> driveway.) Any other indications of actionable levels on their
> property or that of others in the area? Any more testing being done or
> planned?
>
> Thanks for any insights you can share,
>
> Cathy

>
> Catherine Cralle Jones, Esq.
>
> Law Office of F. Bryan Brice, Jr.
>
> 19 W. Hargett St., Suite 600
>
> Raleigh , NC 27601
>
> (919) 754-1600
>
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>

Snavely, Keith

From: Cathy Cralle Jones [cathy@attybryanbrice.com]
Sent: Wednesday, November 14, 2007 11:41 AM
To: <keith.snavely@ncmail.net>
Subject: Morrisville - Xylene Contamination (Knichel Residence)

FILE FILE

Keith,

Could you update me on where this matter stands from your perspective? Has there been any testing done other than that at the Knichel's? (You told me before that there was a hot spot just to the left of the driveway.) Any other indications of actionable levels on their property or that of others in the area? Any more testing being done or planned?

Thanks for any insights you can share,

Cathy

Catherine Cralle Jones, Esq.
Law Office of F. Bryan Brice, Jr.
19 W. Hargett St., Suite 600
Raleigh, NC 27601
(919) 754-1600

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ECS CAROLINAS, LLP

Geotechnical • Construction Materials • Environmental

October 25, 2007

Mr. Keith Snavelly
North Carolina Department of Environment and Natural Resources
Division of Waste Management, Superfund Section
Inactive Hazardous Sites Branch
401 Oberlin Road, Ste. 150
1646 Mail Service Center
Raleigh, NC, 27699-1646

RE: Phase II Remedial Investigation Work Plan
Knichel Residence
223 Ropewalk Court
Morrisville, Wake County, North Carolina
ECS Project Number 06.15416-C

Dear Mr. Snavelly:

ECS Carolinas, LLP (ECS), on behalf of KB Home, appreciates the opportunity to submit this Phase II Remedial Investigation Work Plan (Phase II Work Plan) for limited soil, groundwater and air sampling services at the above-referenced property. This Work Plan is provided in response to our discussions via telephone and is prepared in accordance with the North Carolina Department of Environment and Natural Resources, Division of Waste Management, Superfund Section, Inactive Hazardous Sites Branch, (IHSB) *Guidelines for Assessment and Cleanup (Guidelines)*, August 2007.

Thank you for the opportunity to submit this Work Plan and look forward to your prompt approval of our submittal. Please contact us at 919.861.9910, rconchilla@ecslimited.com or smbrown@ecslimited.com with any questions or comments.

Sincerely,
ECS Carolinas, LLP

Ryan Conchilla
Senior Environmental Scientist

Mark Brown, L.G., P.G., RSM
Principal Geologist
Environmental Services Department Manager

Phase II Remedial Investigation Work Plan
223 Ropewalk Court
Morrisville, Wake County, North Carolina
ECS Project No 06:15416-C
October 25, 2007

**WORK PLAN FOR THE
PHASE II REMEDIAL INVESTIGATION
223 ROPEWALK COURT
MORRISVILLE, WAKE COUNTY, NORTH CAROLINA**

Prepared for:

KB Home, Raleigh-Durham Inc.
2610 Wycliff Road
Suite 102
Raleigh, North Carolina 27607

Prepared by:

ECS Carolinas, LLP.
9001 Glenwood Avenue
Raleigh, NC 27616



Ryan Conchilla
Senior Environmental Scientist
Environmental Services Department



Stephen Mark Brown, LG, PG, RSM
Principal Geologist
Environmental Services Dept. Manager

October 25, 2007

SCOPE OF SERVICES

On October 15, 2007, ECS submitted a Phase I Remediation Investigation (RI) to the Inactive Hazardous Sites Branch (IHSB) in accordance with the IHSB *Guidelines for Assessment and Cleanup (Guidelines)* for Phase I RI activities performed at 223 Ropewalk Court (Knichel residence), Morrisville, NC. The Phase I RI was performed when the resident reported strong suspect odors after the concrete driveway was sealed by KB Home subcontractors on September 18th and 19th, 2007. In our RI, ECS reported that one soil sample (AOC1-6) contained elevated levels of xylene. After review of our report, IHSB, on October 22, 2007, requested that KB Home perform a Limited Phase II RI at the referenced site. The Limited Phase II is to include one soil boring/monitor well to be installed from the ground surface to intersect the water table in the vicinity of AOC1-6, and conduct additional indoor air monitoring at the site residence.

The principal purpose of the recommended Scope of Services for this Phase II Work Plan is to determine if xylene has entered the groundwater table, and if air quality has been impacted. To accomplish this, ECS proposes the following tasks:

Task 1: Preparation of a Health and Safety Plan

A Health and Safety Plan (H&S Plan) is required by federal law before beginning exploratory work on a site. ECS will prepare a H&S Plan for this project, which is intended to cover ECS personnel for the work outlined in this proposal. Our H&S Plan will not cover others for which ECS is not responsible.

Task 2: Soil Sampling Event

In accordance with the IHSB request, ECS proposes to install one soil boring in the vicinity of AOC 1-6 and collect soil samples every five feet from the ground surface to the water table. The soil samples will be collected with the use of a Geoprobe. Soil samples will be collected, placed into zip-lock bags and then be allowed time to volatilize. ECS will then screen for volatile organic compound (VOC) vapor concentrations in the sample bag headspace using a photo ionization detector (PID). The soil samples collected at each five foot interval to the water table will be sent for laboratory analysis regardless of PID readings. The samples will be placed into laboratory-provided containers and placed on ice for submittal to a State of North Carolina-certified laboratory for VOC analysis using Environmental Protection Agency (EPA) Method 8260.

Task 3: Ground Water Sampling Event

Once the soil boring has intersected the water table, ECS will convert the soil boring into a temporary monitor well. ECS will collect one groundwater sample in laboratory-supplied containers, place them on ice and submit them to a State of North Carolina-certified laboratory for VOC analysis using EPA Method 8260.

Task 4: Indoor Air Quality Sampling, Second Event

In addition to the soil and water sampling and in accordance with the IHSB request, ECS proposes to conduct a second indoor air sampling event. To be consistent with the first indoor air tests, similar tests are proposed to be conducted in the kitchen, garage and upstairs bedrooms of the above referenced site. Airborne VOC samples will be collected in three representative areas of the residence and one background sample using evacuated canisters, from four to seven feet above the floor, for 480 minutes. Analysis will be conducted by EMSL Analytical Laboratories, located in Weston, New Jersey using NIOSH Method TO-15 (Gas Chromatography/Mass Spectrometry) (TVOC). Results will be reported as total VOC's and will be

**Phase II Remedial Investigation Work Plan
223 Ropewalk Court
Morrisville, Wake County, North Carolina
ECS Project No 06:15416-C
October 25, 2007**

compared to applicable EPA and European Government recommendations concerning indoor VOC concentrations.

Testing:

TVOCs: Not to exceed 800 ppm
 Xylylene
 Ethylbenzene

All regulated pollutants and any other pollutants will not exceed the NAAQS or the TLV-TWA for that pollutant.

Once baseline samples are taken a scope of work for the remediation will be written based on the sample data that was collected and analyzed.

Once remediation (if needed) is completed clearance samples can be taken in order to determine if the mold contamination has been removed. These samples will be compared to the baseline samples.

Task 5: Reporting

ECS will submit a Phase II Remedial Investigation Report (RI Report) (in accordance with Section 3.0 of the *Guidelines*). This Report will discuss the project background, previous findings, our procedures used, field and laboratory results and provide our evaluation and recommendations. The IHSB will determine what steps, if any, will be taken for further assessment or remediation of the site.

Snavely, Keith

From: RConchilla [RConchilla@ecslimited.com]
Sent: Thursday, October 25, 2007 7:53 AM
To: Keith Snavely
Subject: Phase II RI Work Plan- 223 Ropewalk Court
Attachments: Phase II Work Plan.pdf

MAIL FILE

Attached please find the Phase II RI Work Plan for the Knichel Residence, Morrisville, NC. If you have any questions concerning this Work Plan, please contact me by any of the means listed below.

This field work is tentatively scheduled for tomorrow (October 26).

Ryan J. Conchilla

Senior Environmental Scientist

Phase I Team Leader

ECS Carolinas, LLP

9001 Glenwood Avenue

Raleigh, NC 27617-7505

(919) 861-9862 (direct voice)

(919) 291-5744 (mobile)

(919) 861-9910 (office)

(919) 861-9911 (office fax)

email: rconchilla@ecslimited.com

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Rosemary Skalka
Director of Customer Service
KB Home / Raleigh
(919) 424-1680 (office)
rskalka@kbhome.com

Snavely, Keith

From: Keith Snavely [Keith.Snavely@ncmail.net]
Sent: Monday, October 22, 2007 4:19 PM
To: RConchilla
Subject: Re: FW: MSDS

MAIL FILE

Ryan,

Thanks for the MSDS sheet for the concrete cleaner/stripper compound and the additional information on xylene.

Keith

RConchilla wrote:
Keith,

Here is the MSDS I received from KB Home.

PS. Please see Rosemary's comments below.

Ryan J. Conchilla
Senior Environmental Scientist
Phase I Team Leader
ECS Carolinas, LLP
9001 Glenwood Avenue
Raleigh, NC 27617-7505
(919) 861-9862 (direct voice)
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From: Skalka, Rosemary [<mailto:rskalka@kbhome.com>]
Sent: Monday, October 22, 2007 03:01 pm
To: RConchilla
Subject: MSDS ??

Ryan,

FYI - Attached is the MSDS that someone in my office pulled off the website for XYLENE. Please Note: I would say this is not as accurate as what you pulled, since I believe he just asked for info on Xylene vs for the actual stripping product that was used.

Snavely, Keith

From: RConchilla [RConchilla@ecslimited.com]
Sent: Monday, October 22, 2007 3:03 PM
To: Keith Snavely
Subject: FW: MSDS
Attachments: MSDS for Xylene.pdf

- FILE FILE

Keith,

Here is the MSDS I received from KB Home.

PS. Please see Rosemary's comments below.

Ryan J. Conchilla

Senior Environmental Scientist

Phase I Team Leader

ECS Carolinas, LLP

9001 Glenwood Avenue

Raleigh, NC 27617-7505

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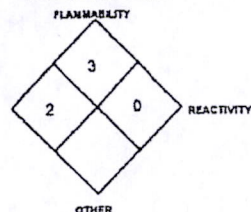
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From: Skalka, Rosemary [mailto:rskalka@kbhome.com]
Sent: Monday, October 22, 2007 03:01 pm
To: RConchilla
Subject: MSDS ??



MATERIAL SAFETY DATA SHEET

NFPA RATING



Prepared to U.S. OSHA, CMA, ANSI and Canadian WHMIS

Standards

PART I What is the material and what do I need to know in an emergency?

1. PRODUCT IDENTIFICATION

CHEMICAL NAME; CLASS:**XYLENES - C₈H₁₀**

Document Number: 1064

PRODUCT USE:

For general analytical/synthetic chemical uses.

SUPPLIER/MANUFACTURER'S NAME:

AIRGAS INC.

ADDRESS:259 Radnor-Chester Road
Suite 100

Radnor, PA 19087-5240

BUSINESS PHONE:

1-610-687-5253

EMERGENCY PHONE:

CHEMTREC: 1-800-424-9300

International: 202-483-7616

DATE OF PREPARATION:

June 6, 1997

SECOND REVISION:

January 16, 1998

2. COMPOSITION and INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	mole %	EXPOSURE LIMITS IN AIR					
			ACGIH		OSHA		IDLH ppm	OTHER
			TLV ppm	STEL ppm	PEL ppm	STEL ppm		
Xylene Three chemical forms (isomers) of Xylene exist: ortho-Xylene, meta-Xylene and para-Xylene. The information presented in this MSDS is given for mixed Xylenes.	1330-20-7	99.9%	100, A4	150	100	150 (Vacated 1989 PEL)	900	NIOSH: 100 TWA; 150 STEL DFG MAK: 100 Carcinogen: IARC-3; TLV-A4; EPA-D
Maximum Impurities		< 0.1	None of the trace impurities in this mixture contribute significantly to the hazards associated with the product. All hazard information pertinent to this product has been provided in this Material Safety Data Sheet, per the requirements of the OSHA Hazard Communication Standard (29 CFR 1910.1200) and State equivalent standards.					

NE = Not Established

C = Ceiling Limit

See Section 16 for Definitions of Terms Used

NOTE: All WHMIS required information is included. It is located in appropriate sections based on the ANSI Z400.1-1993 format.

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: Xylene is a colorless, flammable, toxic liquid, with a characteristic aromatic odor. Inhalation of vapors of Xylene can affect the central nervous system. Symptoms of central nervous system overexposure can include headache, drowsiness, dizziness, fatigue, nausea and weakness. Skin and eye contact can be irritating. This liquid is very flammable; vapors are heavier than air and may travel long distances to source of ignition and flashback. If involved in a fire Xylene will decompose to produce toxic gases (e.g. carbon monoxide, carbon dioxide, reactive hydrocarbons and aldehydes). Persons responding to releases of this product must have adequate fire protection for the specific emergency situation.

SYMPTOMS OF OVEREXPOSURE BY ROUTE OF EXPOSURE:

The most significant routes of occupational overexposure for Xylene are by inhalation, and contact with skin or eyes. The symptoms of overexposure to Xylene by route of exposure are as follows:

INHALATION: Possible symptoms of acute overexposure to vapors of Xylene can include flushing of the face, a feeling of increased heat due to dilation of superficial blood vessels, disturbed vision, tremors, salivation, drowsiness, incoordination and staggering gait, confusion and cardiac stress. Exposures to high concentrations of vapors of Xylene can cause central nervous system effects. Symptoms of central nervous system effects are related to exposure concentrations. The effects associated with various levels of Xylene vapors are as follows:

CONCENTRATION

Above 100 ppm:
~ 200 ppm (3-5 min):

~ 700 ppm:
~ 10,000 ppm

SYMPTOM OF EXPOSURE

Headache, dizziness.
Irritation of the nose, throat and respiratory tract.
Nausea and vomiting.
At this concentration Xylene causes incoordination, loss of consciousness, respiratory failure and death.

Other health effects which have been reported for human inhalation overexposure to Xylene include neuro-behavioral effects (e.g., impaired short term memory and reaction time) and alterations in body balance. In an industrial setting, the most serious overexposures have occurred when vapors of Xylene have accumulated in small, confined spaces. Reversible liver and kidney damage has been reported in cases of severe overexposure to Xylene.

CONTACT WITH SKIN or EYES: Contact with the skin can cause irritation, redness and a burning sensation. Such symptoms are reversible if contact ceases. Repeated or prolonged contact can cause dermatitis, resulting in dry, itchy, cracked skin, as Xylene is a defatting agent, removing oils from the skin. Exposure to the eyes at levels of vapor as low as 200 ppm will cause irritation. Direct contact of the liquid with the eyes can cause irritation, conjunctivitis and corneal burns.



SKIN ABSORPTION: Xylene can be absorbed through intact skin, but is not as significant a route of exposure as via inhalation or ingestion. Mild irritation may occur at the site of skin absorption.

INGESTION: Ingestion of Xylene may produce symptoms of central nervous system depression similar to those described in "Inhalation". The estimated lethal dose via ingestion for humans is 15-30 mL. If ingested, Xylene presents a potential aspiration hazard. The aspiration of Xylene into the lungs can result in severe lung irritation, leading to damage to the lungs, chemical pneumonitis, pulmonary edema and hemorrhage.

INJECTION: Injection is not anticipated to be a significant route of overexposure for this product. If Xylene is "injected" (as may occur through punctures by contaminated, sharp objects), symptoms described in "Inhalation" can occur.

OTHER HEALTH EFFECTS: Additional symptoms of chronic overexposure can include paresthesia (morbid sensations), apprehension, tremors, impaired memory, weakness, nervous irritation, vertigo, headache, anorexia, nausea, flatulence, anemia and mucosal hemorrhage.

HEALTH EFFECTS OR RISKS FROM EXPOSURE: An Explanation in Lay Terms. Overexposure to may cause the health effects described on the following page.

HAZARDOUS MATERIAL INFORMATION SYSTEM			
HEALTH		(BLUE)	2
FLAMMABILITY		(RED)	3
REACTIVITY		(YELLOW)	0
PROTECTIVE EQUIPMENT			C
EYES	RESPIRATORY	HANDS	BODY
	See Section 8		See Section 8
For routine industrial applications			

See Section 16 for Definition of Ratings

3. HAZARD IDENTIFICATION (Continued)

ACUTE: Acute inhalation overexposure to Xylene will initially act as a narcotic, possibly leading to coma in extreme cases. Following exposure to high concentrations, victims may be unconscious, and if exposure continues, death can follow from respiratory failure. Contact with the skin can cause irritation and dermatitis. Contact with the eyes is irritating, causing burning and watering of the eyes. Ingestion of Xylene will cause gastric distress and possible severe depression of the central nervous system. Aspiration of Xylene into the lungs, following ingestion, can result in severe damage to the lungs; death may result.

CHRONIC: Symptoms of chronic inhalation can include respiratory irritation, central nervous system excitation, followed by depression. Xylene is a suspect carcinogen. See Section 11 (Toxicological Information) for further information.

TARGET ORGANS: Respiratory system, central nervous systems, heart, kidneys, skin, eyes and liver.

PART II *What should I do if a hazardous situation occurs?*

4. FIRST-AID MEASURES

RESCUERS SHOULD NOT ATTEMPT TO RETRIEVE VICTIMS OF EXPOSURE TO XYLENE WITHOUT ADEQUATE PERSONAL PROTECTIVE EQUIPMENT. If necessary, a Self-Contained Breathing Apparatus should be worn.

INHALATION: If vapors, mists, or sprays of Xylene are inhaled, remove victim to fresh air. Only trained personnel should administer supplemental oxygen and/or cardio-pulmonary resuscitation if necessary. Remove or cover gross contamination to avoid exposure to rescuers.

SKIN EXPOSURE: If Xylene contaminates the skin, immediately begin decontamination with running water. Minimum flushing is for 15 minutes. Remove exposed or contaminated clothing, taking care not to contaminate eyes. Victim must seek medical attention if any adverse reaction occurs.

EYE EXPOSURE: If Xylene or its vapors enter the eyes, open victim's eyes while under gentle running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes. Victim must seek immediate medical attention.

INGESTION: If Xylene is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, do not induce vomiting. Victim should drink milk, egg whites, or large quantities of water. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow.

Victims of chemical exposure must be taken for medical attention. Rescuers should be taken for medical attention, if necessary. Physicians should refer to "Recommendations to Physicians" in Section 11 (Toxicological Information). Take copy of label and MSDS to health professional with victim.

5. FIRE-FIGHTING MEASURES

FLASH POINT, (Closed Cup): 17-25°C (62.6-77°F)

AUTOIGNITION TEMPERATURE: 464°C (867°F)

FLAMMABLE LIMITS (in air by volume, %):

Lower (LEL): 1.0%

Upper (UEL): 7.0%

FIRE EXTINGUISHING MATERIALS:

Water Spray: YES (for cooling only)

Foam: YES

Halon: YES

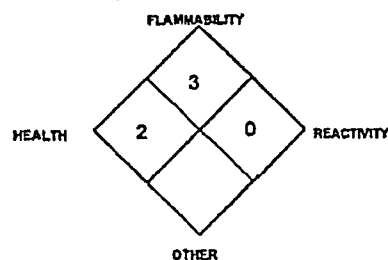
Carbon Dioxide: YES

Dry Chemical: YES

Other: Any "B" Class.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Xylene is a Class IB flammable liquid and presents a serious fire hazard to firefighters. Due to the low flash point, vapors can form explosive mixtures with air, at or above 17°C (63°F). When involved in a fire, this material may decompose and produce toxic gases (e.g., carbon monoxide, carbon dioxide, reactive hydrocarbons and aldehydes). The vapors of Xylene are heavier than air and may spread long distances; distant ignition and flash-back are possible. Xylene can float on water; therefore, water contaminated with this product can spread the flammable liquid and can spread fire. Containers of Xylene, when involved in fire, may rupture or burst in the heat of the fire.

NFPA RATING



See Section 16 for Definition of Ratings

5. FIRE-FIGHTING MEASURES (Continued)

Explosion Sensitivity to Mechanical Impact: Not sensitive.

Explosion Sensitivity to Static Discharge: Xylene can accumulate static charge by flow or agitation; vapors can be ignited by static discharge.

SPECIAL FIRE-FIGHTING PROCEDURES: In the event of fire, cool containers of this product with water to prevent failure. Use a water spray or fog to reduce or direct vapors. Water may not be effective in actually extinguishing a fire involving Xylene, due to its low flash point. Stop the leak or discharge, if possible. For small releases, if it is not possible to stop the leak, and it does not endanger personnel, let the fire burn itself out. Incipient fire responders should wear eye protection. Structural fire fighters must wear Self-Contained Breathing Apparatus and full protective equipment. Large fires should be fought from a distance with an unmanned hose holder or monitor nozzles. If this product is involved in a fire, fire run-off water should be contained to prevent possible environmental damage. If necessary, decontaminate fire-response equipment with soap and water solution. For large releases, consider evacuation. Refer to the North American Emergency Response Guidebook (Guide #130) for additional guidance.

6. ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE: Evacuate immediate area. Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a release, clear the affected area, protect people, and respond with trained personnel.

Minimum Personal Protective Equipment should be Level B: triple-gloves (rubber gloves and nitrile gloves, over latex gloves), chemically resistant suit and boots, hard-hat, and Self-Contained Breathing Apparatus. Monitor the surrounding area for combustible vapor levels. Combustible vapor levels must be below 10% of the LEL for Xylene (LEL = 1.0%) before personnel are permitted to enter the area. If necessary, ventilate area.

Monitoring should be done for the levels of Xylene and oxygen. Colorimetric tubes are available to detect the presence of Xylene. Levels of Xylene should be below levels listed in Section 2 (Composition and Information on Ingredients) and the atmosphere must have at least 19.5 percent oxygen before personnel can be allowed in the area without Self-Contained Breathing Apparatus.

Eliminate all sources of ignition before clean-up operations begin. Use non-sparking tools. Absorb spilled liquid with activated carbon, polypads or other suitable absorbent materials. Prevent material from entering sewer or confined spaces. Decontaminate the area thoroughly. Place all spill residue in an appropriate container and seal. If necessary, decontaminate spill-response equipment with soap and water solution. Dispose of in accordance with Federal, State, and local hazardous waste disposal regulations (see Section 13, Disposal Considerations).

THIS IS A TOXIC, FLAMMABLE LIQUID: Protection of all personnel and the area must be maintained. All responders must be adequately protected from exposure.

PART III *How can I prevent hazardous situations from occurring?*

7. HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash hands after handling chemicals. Do not eat or drink while handling this material. Remove contaminated clothing immediately.

STORAGE AND HANDLING PRACTICES: All employees who handle this material should be trained to handle it safely. Avoid breathing vapors or mists generated by this product. Use in a well-ventilated location. Cylinders of this product must be properly labeled. If this product is used in other types of containers, only use portable containers and dispensing equipment (faucet, pump, drip can) approved for flammable liquids. Post "NO SMOKING" signs, where appropriate in storage and use areas.

Store cylinders of this product in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Do not allow area where cylinders are stored to exceed 52°C (125°F). Material should be stored in secondary containers, or in a diked area, as appropriate. Store containers away from incompatible chemicals. Keep container tightly closed when not in use. Storage areas should be made of fire-resistant materials. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged. Refer to NFPA 30, Flammable and Combustible Liquids Code for additional information on storage.

Empty containers may contain residual flammable liquid or vapors. Therefore, empty containers should be handled with care. Do not expose "empty" containers to welding touches, or any other source of ignition.

7. HANDLING and STORAGE (Continued)

SPECIAL PRECAUTIONS FOR HANDLING CYLINDERS: Protect cylinders of this product against physical damage. If appropriate, cylinders should be stored in an up-right position. Cylinders should be firmly secured to prevent falling or being knocked over. Cylinders can be stored in the open, but in such cases, should be protected against extremes of weather and from the dampness of the ground to prevent rusting. Never tamper with pressure relief devices in valves and cylinders. Electrical equipment should be non-sparking or explosion proof. The following rules are applicable to situations in which cylinders are being used:

Before Use: If appropriate, move cylinders with a suitable hand truck. Do not drag, slide, or roll cylinders. Do not drop cylinders or permit them to strike each other. Secure cylinders firmly. Leave the valve protection cap in-place until cylinder is ready for use.

During Use: Use designated CGA fittings and other support equipment. Do not use adapters. Do not heat cylinder by any means to increase the discharge rate of the product from the cylinder. Use check valve or trap in discharge line to prevent hazardous backflow into the cylinder. Do not use oils or grease on gas-handling fittings or equipment.

After Use: Close main cylinder valve. Replace valve protection cap. Mark empty cylinders "EMPTY".

NOTE: Use only DOT or ASME code containers. Earth-ground and bond all lines and equipment associated with this product. Close valve after each use and when empty. Cylinders must not be recharged except by or with the consent of owner. For additional information refer to the Compressed Gas Association Bulletin SB-2 "Oxygen Deficient Atmospheres".

PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT: Follow practices indicated in Section 6 (Accidental Release Measures). Make certain application equipment is locked and tagged-out safely. Always use this product in areas where adequate ventilation is provided. Decontaminate equipment using soapy water before maintenance begins. Collect all rinsates and dispose of according to applicable Federal, State, or local procedures.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation. Use a mechanical fan or vent area to outside. Where appropriate, use a non-sparking, grounded ventilation system separate from other exhaust ventilation systems. Ensure eyewash/safety shower stations are available near areas where this product is used.

RESPIRATORY PROTECTION: Maintain exposure levels of Xylene below the levels listed in Section 2 (Composition and Information on Ingredients) and oxygen levels above 19.5% in the workplace. Use supplied air respiratory protection if Xylene levels exceed exposure limits and if oxygen level is below 19.5% or during emergency response to a release of this product. If respiratory protection is required, follow the requirements of the Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), or equivalent State standards. The following NIOSH respiratory protection recommendations are for o-Xylene, (applicable to the mixture of o-Xylene, m-Xylene, and p-Xylene).

CONCENTRATION

Up to 900 ppm

RESPIRATORY EQUIPMENT

Chemical cartridge respirator with organic vapor cartridges; or gas mask with organic vapor canister, or powered, air-purifying respirator with organic vapor cartridges, or Supplied Air Respirator (SAR), or full-facepiece SCBA.

Emergency or Planned Entry into Unknown Concentration or IDLH Conditions: Positive-pressure, full facepiece SCBA or positive pressure, full-facepiece Supplied Air Respirator (SAR) with an auxiliary positive pressure SCBA.

Escape

Gas mask with organic vapor cartridge or escape-type SCBA should be used.

The IDLH concentration for Xylene (o-Xylene, m-Xylene or p-Xylene) is 900 ppm.

EYE PROTECTION: Splash goggles or safety glasses. Face-shields should be worn if contact with the liquid is anticipated.

HAND PROTECTION: Wear leather gloves for handling of cylinders of this product. Wear chemically resistant gloves appropriate for Xylene for industrial use. Gloves should have a resistance to breakthrough greater than 8 hours, such as Teflon™ or Viton™. Butyl rubber, natural rubber, neoprene, nitrile rubber, or polyethylene are not recommended. Use triple gloves for spill response (see Section 6, Accidental Release Measures).

BODY PROTECTION: Use body protection appropriate for task. Transfer of large quantities under pressure may require protective equipment appropriate to protect employees from splashes of liquefied product. Safety shoes are recommended when handling cylinders.

9. PHYSICAL and CHEMICAL PROPERTIES

RELATIVE VAPOR DENSITY (air = 1): 3.7
SPECIFIC GRAVITY (@ 20°C (68°F) (water = 1): 0.86

pH: Not applicable.

FREEZING/MELTING POINT: Variable, depending on isomer blend.

SOLUBILITY IN WATER @ 25°C (77°F): 130 mg/L
EVAPORATION RATE (nBuAc = 1): 0.7

BOILING POINT: 264-302°F (137.2-140°C)
ODOR THRESHOLD: 1 ppm and 20 ppm (detection);
40 ppm (recognition)

EXPANSION RATIO: Not applicable.

SPECIFIC VOLUME: 5.5

LOG COEFFICIENT WATER/OIL DISTRIBUTION: Log P (oct) = 3.12-3.33

VAPOR PRESSURE @ 20°C(68°F): 6-6.5 mm Hg (0.8-0.867 kPa)

APPEARANCE AND COLOR: Colorless, flammable liquid, with a strong, gasoline-like odor.

HOW TO DETECT THIS SUBSTANCE (warning properties): The odor of Xylene is a good warning property as the TLV is more than 10 times the odor threshold. Some olfactory fatigue can occur at low ppm concentrations.

10. STABILITY and REACTIVITY

STABILITY: Normally stable.

DECOMPOSITION PRODUCTS: If Xylene is involved in a fire, it may decompose yielding toxic fumes of carbon monoxide, carbon dioxide, reactive hydrocarbons and aldehydes.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Xylene is incompatible with strong oxidizers, increasing the risk of fire and explosion. Xylene reacts violently to nitric acid and dichlorohydrantoin. Xylene can attack some forms of plastics, rubber and coatings.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Avoid contact with incompatible materials, sparks, flame static discharge and other sources of ignition. Avoid exposing cylinders to extremely high temperatures, which could cause the cylinders to rupture or burst.

PART III *How can I prevent hazardous situations from occurring?*

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA: The following information is available for Xylene.

Eye effects-Human 200 ppm

Skin-Rabbit, adult 100% Moderate irritation effects

Skin-Rabbit, adult 500 mg/24 hours Moderate irritation effects

Eye effects-Rabbit, adult 87 mg Mild irritation effects

Eye effects-Rabbit, adult 5 mg/24 hours Severe irritation effects

Cytogenetic Analysis-Saccharomyces cerevisiae 1 mmol/tube

Inhalation-Rat TCLo :50 mg/m³/6 hours (female 1-21 days post):Reproductive effects

Inhalation-Rat TCLo: 50 mg/m³/6 hours (female 1-21 days post):Teratogenic effects

Oral-Human LDLo: 50 mg/kg

Inhalation-Man LCLo: 10,000 ppm/6 hours

Inhalation-Human TCLo :200 ppm: Nose , Eye effects, Pulmonary system effects

Oral-Rat LD50: 4300 mg/kg

Inhalation-Rat LC50: 5000 ppm/4 hours

Intraperitoneal-Rat LD50: 2459 mg/kg

Oral-Unspecified effects LD50: 4300 mg/kg

Inhalation-Unspecified effects LC50: 30 g/m³

SUSPECTED CANCER AGENT: Xylene is listed as follows: EPA-D (No Evidence for Carcinogenicity in Humans); IARC -3 (Not Classifiable as to Human Carcinogenicity).

Xylene is not found on the following lists: FEDERAL OSHA Z LIST, NTP, CAL/OSHA; therefore is neither considered to be nor suspected to be a cancer-causing agent by these agencies.

IRRITANCY OF PRODUCT: Xylene is irritating to the skin, eyes, and other contaminated tissue.

SENSITIZATION OF PRODUCT: Xylene is not known to cause respiratory system or skin sensitization in humans. Cardiac sensitization to stimulants (e.g., epinephrine, ephedrine) is a possible result of severe or chronic overexposure.

REPRODUCTIVE TOXICITY INFORMATION: Listed below is information concerning the effects of Xylene on the human reproductive system.

Mutagenicity: Mutagenic data are available from clinical studies involving test animals exposed to relatively high doses of Xylene.

11. TOXICOLOGICAL INFORMATION (Continued)

REPRODUCTIVE TOXICITY INFORMATION (continued):

Embryotoxicity: Xylene is not reported to cause embryotoxic effects in humans.

Teratogenicity: Xylene is not reported to cause embryotoxic effects in humans. There have been numerous teratogenicity studies on test animals for mixed xylenes and individual xylene isomers. In general, the results indicate that while xylenes may cause fetotoxic effects at high exposure levels, they are not teratogenic at exposure levels which are not toxic to the mother.

Reproductive Toxicity: Data on reproductive effects are available from clinical studies involving test animals exposed to relatively high doses of Xylene.

A **mutagen** is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An **embryotoxin** is a chemical which causes damage to a developing embryo (i.e. within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A **teratogen** is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A **reproductive toxin** is any substance which interferes in any way with the reproductive process.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing respiratory conditions, central nervous system, liver, kidney, and cardio-vascular conditions may be aggravated by severe or chronic overexposure to this product. Skin disorders may also be aggravated by exposures to Xylene.

RECOMMENDATIONS TO PHYSICIANS: The following guidelines are derived from "Clinical Toxicology of Commercial Chemical Products" (5th edition, 1984).

- Check for signs of impending pulmonary edema.
- Because of the aspiration hazard, avoid emetic drugs, whenever practical.
- For ingestion overexposures in which Xylene contains another toxic component and induction of emesis is advisable: If the patient is not drowsy, comatose, or in respiratory difficulty, induce vomiting. If necessary, as an alternative treatment, remove Xylene from the stomach via gastric lavage. One or two ounces of mineral oil may be instilled and left in the stomach at the completion of lavage.
- Avoid epinephrine because of its possible adverse effect on the sensitized myocardium. Avoid all digestible fats, oils and alcohol, which may promote the absorption of Xylene in the intestinal system.
- If eyes or skin are affected, wash thoroughly and apply a bland analgesic ointment.
- Because of the possibility of ventricular fibrillation, monitor the ECG continuously and be prepared to administer external cardiac massage.
- In chronic solvent abusers, correct dehydration, acidosis, hypokalemia and hypophosphatemia. Usually toxic signs and symptoms (except those due to neuropathies and to cerebellar lesions) disappear within a few days after fluid and electrolyte abnormalities are corrected.

BIOLOGICAL EXPOSURE INDICES (BEIs): The following Biological Exposure Indices (BEIs) are currently applicable for Xylene.

BIOLOGICAL EXPOSURE INDICES (BEIs) for Xylene are as follows:		
CHEMICAL DETERMINANT	SAMPLING TIME	BEI
XYLENES • Methylhippuric acids in urine	• End of shift	• 1.5 g/g creatinine

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL STABILITY: Xylene will be degraded over time into other organic compounds. The following environmental data are available for Xylene.

Log K_{ow} = 3.5-6.8. Water Solubility = 146-175 mg/L. Bioconcentration Factors = 3.1-3.2 (Estimated); 2.14-2.20 (fish); 1.3 (eels). Xylenes will photochemically degrade; however, xylenes tend to persist in the environment and seem to be very slowly biodegraded. Bioconcentration is not expected to be significant.

EFFECT OF MATERIAL ON PLANTS or ANIMALS: Xylene may be harmful or fatal to contaminated plant and animal life (especially if large quantities of this product are released). Refer to Section 11 (Toxicology Information) for further information of the effects of this product on test animals.

EFFECT OF CHEMICAL ON AQUATIC LIFE: Xylene can be harmful or fatal to contaminated aquatic plant and animal life. Xylene floats on water, and can potentially form slicks which are capable of creating oxygen-deprived waterways which can contaminate coastal and shore life. Aquatic toxicity data are available for Xylene as follows on the next page:

12. ECOLOGICAL INFORMATION (Continued)

EFFECT OF CHEMICAL ON AQUATIC LIFE (continued):

LC₅₀ (goldfish) = 13 mg/L; 24 hr
LC₅₀ (rainbow trout) = 13.5 mg/L; 96 hr
LC₅₀ (*Pimephales promelas*, fathead minnow) = 46 mg/L; 1 hour;
42 mg/L (24-96 hours)
LC₅₀ (*Carassius auratus*, goldfish) = 16.9 ppm; 96 hr
LC₅₀ (zebra fish; *Brachydanio rerio*) = 20 mg/L; 48 hours, flow-
through tests
LC₅₀ (rainbow trout; *Salmo gairdneri*) = 8.05-8.2 mg/L; 96 hours,
flow-through and static tests
LC₅₀ (fathead minnow; *Pimephales promelas*) = 16.1 mg/L; 96
hours, flow-through tests
LC₅₀ (bluegill; *Lepomis macrochirus*) = 16.1 mg/L; 96 hours, flow-
through tests

LC₅₀ (goldfish; *Carassius auratus*) = 16.1 mg/L; 96 hours, flow-
through tests
LC₅₀ (white sucker; *Castostomus commersoni*) = 16.1 mg/L; 96
hours, flow-through tests
LC₅₀ (fathead minnow; *Pimephales promelas*) = 28.77-26.7 mg/L;
24, 48, 96 hours, static tests
LC₅₀ (bluegill; *Lepomis macrochirus*) = 24.0-20.87 mg/L; 24, 48, 96
hours, static tests
LC₅₀ (goldfish; *Carassius auratus*) = 36.81 mg/L; 24, 48, 96 hours,
static tests
EC₅₀ (water flea; *Daphnia magna*) = 3.82 mg/L; 48 hours, flow-
through tests, sensitive to exposure
EC₅₀ (snail (*Aplexa hypnorum*)) = 22.4 mg/L; 96 hours, resistant to
exposure

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate Federal, State, and local regulations. Return cylinders with residual product to Airgas Inc. Do not dispose of locally.

14. TRANSPORTATION INFORMATION

THIS MATERIAL IS HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.

PROPER SHIPPING NAME: Xylenes
HAZARD CLASS NUMBER and DESCRIPTION: 3 (Flammable Liquid)
UN IDENTIFICATION NUMBER: UN 1307
PACKING GROUP: PG II
DOT LABEL(S) REQUIRED: Flammable Liquid
NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (1996): 130

MARINE POLLUTANT: Xylene is not classified by the DOT as a Marine Pollutant (as defined by 49 CFR 172.101, Appendix B).

TRANSPORT CANADA, TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: THIS MATERIAL IS CONSIDERED AS DANGEROUS GOODS. Use the above information for the preparation of Canadian Shipments. In addition, there is an additional Hazard Class: 9.2 (Substance Hazardous to the Environment).

15. REGULATORY INFORMATION

U.S. SARA REPORTING REQUIREMENTS: Xylene is subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act, as follows:

COMPONENT	SARA 302 (40 CFR 355, Appendix A)	SARA 304 (40 CFR Table 302.4)	SARA 313 (40 CFR 372.65)
Xylene	NO	YES	YES

U.S. SARA THRESHOLD PLANNING QUANTITY: Not applicable.

U.S. CERCLA REPORTABLE QUANTITIES (RQ): 100 lb.

CANADIAN DSL/NDL INVENTORY STATUS: Xylene is on the DSL Inventory.

U.S. TSCA INVENTORY STATUS: Xylene is listed on the TSCA Inventory.

OTHER U.S. FEDERAL REGULATIONS: Xylene is a hazardous substance under Section 311(b)(2A) of the Federal Water Pollution Control Act. Xylene is not listed in Appendix A as a highly hazardous chemical, per 29 CFR 1910.119: Process Safety Management of Highly Hazardous Chemicals. Under this regulation, however, any process that involves a flammable liquid on-site, in one location, in quantities of 10,000 lbs (4,553 kg) or greater is covered under this regulation unless it is used as a fuel.

15. REGULATORY INFORMATION (Continued)

U.S. STATE REGULATORY INFORMATION: Xylene is covered under the following specific State regulations:

Alaska - Designated Toxic and Hazardous Substances: Xylenes.
California - Permissible Exposure Limits for Chemical Contaminants: Xylenes.
Florida - Substance List: Xylenes.
Illinois - Toxic Substance List: Xylenes.
Kansas - Section 302/313 List: Xylenes.
Massachusetts - Substance List: Xylenes.

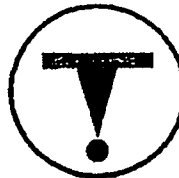
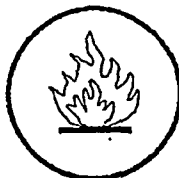
Michigan Critical Materials Register: Xylenes.
Minnesota - List of Hazardous Substances: Xylenes.
Missouri - Employer Information/Toxic Substance List: Xylenes.
New Jersey - Right to Know Hazardous Substance List: Xylenes.
North Dakota - List of Hazardous Chemicals, Reportable Quantities: Xylenes.

Pennsylvania - Hazardous Substance List: Xylenes.
Rhode Island - Hazardous Substance List: Xylenes.
Texas - Hazardous Substance List: Xylene.
West Virginia - Hazardous Substance List: Xylenes.
Wisconsin - Toxic and Hazardous Substances: Xylenes.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): Xylene is not on the California Proposition 65 Lists.

LABELING: WARNING! FLAMMABLE LIQUID AND VAPOR. FLASH POINT = 17-25°C (62.6-77°F). HARMFUL IF INHALED. PROLONGED OR REPEATED SKIN CONTACT MAY DRY SKIN AND CAUSE IRRITATION. CAN CAUSE CENTRAL NERVOUS SYSTEM EFFECTS. CAN CAUSE ADVERSE EFFECTS ON THE BLOOD SYSTEM. LIVER, KIDNEYS. CAN CAUSE DEATH IF TOO MUCH IS BREATHED. ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE. Keep away from heat, sparks and flame. Keep container closed. Use only with adequate ventilation. Avoid contact with skin and clothing. Avoid exposure to vapor. Wash thoroughly after handling. **FIRST-AID:** In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if irritation develops or persists. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of fire, use water fog, foam, dry chemical, or CO₂. In case of spill: Absorb spill with inert materials (e.g. activated carbon, dry sand). Flush residual spill with water. Consult Material Safety Data Sheet for additional information.

CANADIAN WHMIS SYMBOLS: Class B2: Flammable Liquid.
Class D2B: Material Causing Other Toxic Effects



16. OTHER INFORMATION

PREPARED BY:

CHEMICAL SAFETY ASSOCIATES, Inc.
9163 Chesapeake Drive, San Diego, CA 92123-1002
619/565-0302

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. AIRGAS, Inc. assumes no responsibility for injury to the vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, AIRGAS, Inc. assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

DEFINITIONS OF TERMS

A large number of abbreviations and acronyms appear on a MSDS. Some of these which are commonly used include the following:

CAS #: This is the Chemical Abstract Service Number which uniquely identifies each constituent. It is used for computer-related searching.

EXPOSURE LIMITS IN AIR:

ACGIH - American Conference of Governmental Industrial Hygienists, a professional association which establishes exposure limits. **TLV** - Threshold Limit Value - an airborne concentration of a substance which represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour Time Weighted Average (TWA), the 15-minute Short Term Exposure Limit, and the Instantaneous Ceiling Level (C). Skin absorption effects must also be considered.

OSHA - U.S. Occupational Safety and Health Administration. **PEL** - Permissible Exposure Limit - This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants Rule (Federal Register: 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL," is placed next to the PEL which was vacated by Court Order.

IDLH - Immediately Dangerous to Life and Health - This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury. The **DFG - MAK** is the Republic of Germany's Maximum Exposure Level, similar to the U.S. **PEL**.

NIOSH is the National Institute of Occupational Safety and Health, which is the research arm of the U.S. Occupational Safety and Health Administration (OSHA). NIOSH issues exposure guidelines called Recommended Exposure Levels (RELs). When no exposure guidelines are established, an entry of NE is made for reference.

HAZARD RATINGS:

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: Health Hazard: 0 (minimal acute or chronic exposure hazard); 1 (slight acute or chronic exposure hazard); 2 (moderate acute or significant chronic exposure hazard); 3 (severe acute exposure hazard; onetime overexposure can result in permanent injury and may be fatal); 4 (extreme acute exposure hazard; onetime overexposure can be fatal). Flammability Hazard: 0 (minimal hazard); 1 (materials that require substantial pre-heating before burning); 2 (combustible liquid or solids; liquids with a flash point of 38-93°C [100-200°F]); 3 (Class IB and IC flammable liquids with flash points below 38°C [100°F]); 4 (Class IA flammable liquids with flash points below 23°C [73°F] and boiling points below 38°C [100°F]). Reactivity Hazard: 0 (normally stable); 1 (material that can become unstable at elevated temperatures or which can react slightly with water); 2 (materials that are unstable but do not detonate or which can react violently with water); 3 (materials that can detonate when initiated or which can react explosively with water); 4 (materials that can detonate at normal temperatures or pressures).

NATIONAL FIRE PROTECTION ASSOCIATION: Health Hazard: 0 (material that on exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials); 1 (materials that on exposure under fire conditions could cause irritation or minor residual injury); 2 (materials that on intense or continued exposure under fire conditions could cause temporary incapacitation or possible residual injury); 3 (materials that can on short exposure could cause serious temporary or residual injury); 4 (materials that under very short exposure causes death or major residual injury). Flammability Hazard and Reactivity Hazard Refer to definitions for "Hazardous Materials Identification System".

FLAMMABILITY LIMITS IN AIR:

Much of the information related to fire and explosion is derived from the National Fire Protection Association (NFPA). Flash Point - Minimum temperature at which a liquid gives off sufficient vapors to form an ignitable mixture with air. Autoignition Temperature: The minimum temperature required to initiate combustion in air with no other source of ignition. LEL - the lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source. UEL - the highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.

TOXICOLOGICAL INFORMATION:

Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. Definitions of some terms used in this section are: **LD₅₀** - Lethal Dose (solids & liquids) which kills 50% of the exposed animals; **LC₅₀** - Lethal Concentration (gases) which kills 50% of the exposed animals; ppm - concentration expressed in parts of material per million parts of air or water; mg/m³ - concentration expressed in weight of substance per volume of air; mg/kg - quantity of material, by weight, administered to a test subject, based on their body weight in kg. Data from several sources are used to evaluate the cancer-causing potential of the material. The sources are: **IARC** - the International Agency for Research on Cancer; **NTP** - the National Toxicology Program; **RTECS** - the Registry of Toxic Effects of Chemical Substances, OSHA and **Cal/OSHA**. **IARC** and **NTP** rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Subrankings (2A, 2B, etc.) are also used. Other measures of toxicity include **TDLo**, the lowest dose to cause a symptom and **TCLo** the lowest concentration to cause a symptom; **TD₀**, **LDLo**, and **LD₀**, or **TC**, **TC₀**, **LCLo**, and **LC₀**, the lowest dose (or concentration) to cause lethal or toxic effects. **BEI** - Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV. Ecological Information: **EC** is the effect concentration in water.

REGULATORY INFORMATION:

This section explains the impact of various laws and regulations on the material. **EPA** is the U.S. Environmental Protection Agency. **WHMIS** is the Canadian Workplace Hazardous Materials Information System. **DOT** and **TC** are the U.S. Department of Transportation and the Transport Canada, respectively. Superfund Amendments and Reauthorization Act (SARA); the Canadian Domestic/Non-Domestic Substances List (DSL/NDSL); the U.S. Toxic Substance Control Act (TSCA) Marine Pollutant status according to the DOT; the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) and various state regulations.

Snavely, Keith

From: Skalka, Rosemary [rskalka@kbhome.com]
Sent: Monday, October 22, 2007 2:14 PM
To: Keith Snavely
Subject: RE: Assessment Report Review 223 Rope Walk Court

Thank you Keith. I am forwarding to ECS and to Mr. & Mrs. Knichel. As you and I discussed, I will also tell the Knichel's that they may call you directly if they would like you explain anything to them in greater detail. Thank you so much for your assistance.

Rosemary Skalka
Director of Customer Service
KB Home / Raleigh
(919) 424-1680 (office)
(919) 669-9687 (mobile)
rskalka@kbhome.com

-----Original Message-----

From: Keith Snavely [mailto:Keith.Snavely@ncmail.net]
Sent: Monday, October 22, 2007 2:07 PM
To: Skalka, Rosemary
Subject: Assessment Report Review 223 Rope Walk Court

Rosemary,

Here's the revised letter. Note there is a slight modification in the file name: "Assessment_.....".

Keith



North Carolina Department of Environment and Natural Resources

R. Matthews, Director

Division of Waste Management

Michael F. Easley, Governor
William G. Ross Jr., Secretary

October 22, 2007

Ms. Rosemary Skalka
Director of Customer Service
KB Homes
2610 Wycliff Road Suite 102
Raleigh, NC 27607

MAIL FILE

RE: Assessment of 223 Rope Walk Court
Morrisville, Wake County

Ms. Skalka:

I have reviewed ECS Carolinas' October 15, 2007 Phase I Remedial Investigation Report ("Report") of the Knichel residence at 223 Rope Walk Court ("Site"). Only one soil sample (AOC1-6) of the five areas of concern contained xylene at elevated concentrations. This sample contained a total xylene concentration of 77 mg/kg or parts per million in soil. This sample result is below the Inactive Hazardous Sites Branch ("Branch") health-based remediation goal for unrestricted use, but exceeds twenty (20) times the NCAC 2L groundwater standard for xylene.

Therefore, KB Homes must advance a soil boring from ground surface to the water table in the vicinity of AOC1-6 to confirm this contaminant has not entered groundwater. Soil samples must be collected every five feet from ground surface to the water table and each soil sample shall be analyzed for volatile organic compounds (VOCs) by US EPA Method 8260. The boring should be completed into a monitoring well and one groundwater sample must be collected and analyzed for VOCs by USEPA 8260. This sample should be collected through a geoprobe if possible to minimize the amount of soil cuttings. Any soil cuttings or purge water shall be containerized and held until the groundwater/soil samples are analyzed.

In addition to the soil sampling, ECS also conducted indoor air ("air") monitoring at the Site residence. The air sample results were found to be below the US EPA action levels for each contaminant detected in samples collected from the kitchen and garage. Although, the Report from ECS indicates that various action levels or ranges (see page 5 of 9 of the Report) exist for VOCs in new buildings, the action level that the Branch uses is the toxic action level. For xylene that action level is 7000 ug/cubic meter. However, since other VOCs are present in the sample that affect human target organs the same as xylene, the concentrations of these compounds and their action levels must be adjusted to determine a final action level for each sample collected. That action level for xylene is 1400 ug/cubic meter for the kitchen sample and 1750 ug/cubic meter for the garage sample. When these final

action levels are compared to the air sample results from the kitchen and garage, all contaminants of concern are below action levels.

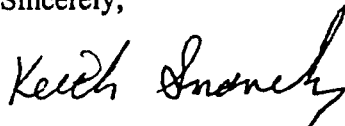
Even though the air sample results indicate that xylene is below action levels, a second indoor air sampling event must be conducted. The air samples from this second event will provide additional data to determine if the VOCs detected are remaining nearly consistent. These indoor air results do not necessarily indicate that the elevated xylenes came from the xylene driveway cleanup only but show a combination of VOCs existing in the house prior to and during the tests. These VOCs can result from off-gasing of carpeting from new homes, paints and varnishes, and VOCs from gasoline cans.

To be consistent with the first indoor air tests, similar tests should be conducted in the kitchen and garage for a second sampling event. ECS must also collect additional samples in the upstairs bedrooms.

Please provide a brief work plan for review and approval prior to conducting this Phase II work at the Site. The work plan should include a brief description of the installation of the soil boring and the second air sampling event. Since the residents have been temporarily relocated, and wish to return home, please submit the brief plan for conducting the air sampling so the testing can begin as soon as possible. In addition to the tasks above, please submit a copy of the MSDS sheet for the compound used on the driveway at the Site and the soil sample results and manifest(s) for the disposal of soil removed from the Site and stored at the Yard Nique property.

If you have any questions, I can be reached at (919) 508-8479.

Sincerely,



Keith Snavelly, Hydrogeologist
Inactive Hazardous Sites Branch
Superfund Section

cc: Ryan Conchilla, ECS
Mark Brown, ECS
Stephanie Knichel, 223 Rope Walk Court

Snavely, Keith

From: Keith Snavely [Keith.Snavely@ncmail.net]
Sent: Monday, October 22, 2007 2:07 PM
To: Skalka, Rosemary
Subject: Assessment Report Review 223 Rope Walk Court
Attachments: Assessment_Review_223 Rope Walk Court.pdf

DATE FILE

Rosemary,

Here's the revised letter. Note there is a slight modification in the file name: "Assessment_.....".

Keith



North Carolina Department of Environment and Natural Resources

R. Matthews, Director

Division of Waste Management

Michael F. Easley, Governor
William G. Ross Jr., Secretary

October 22, 2007

Ms. Rosemary Skalka
Director of Customer Service
KB Homes
2610 Wycliff Road Suite 102
Raleigh, NC 27607

RE: Assessment of 223 Rope Walk Court
Morrisville, Wake County

Ms. Skalka:

I have reviewed ECS Carolinas' October 15, 2007 Phase I Remedial Investigation Report ("Report") of the Knichel residence at 223 Rope Walk Court ("Site"). Only one soil sample (AOC1-6) of the five areas of concern contained xylene at elevated concentrations. This sample contained a total xylene concentration of 77 mg/kg or parts per million in soil. This sample result is below the Inactive Hazardous Sites Branch ("Branch") health-based remediation goal for unrestricted use, but exceeds twenty (20) times the NCAC 2L groundwater standard for xylene.

Therefore, KB Homes must advance a soil boring from ground surface to the water table in the vicinity of AOC1-6. Soil samples must be collected every five feet from ground surface to the water table and each soil sample shall be analyzed for volatile organic compounds (VOCs) by US EPA Method 8260. The boring should be completed into a monitoring well and one groundwater sample must be collected and analyzed for VOCs by USEPA 8260. This sample should be collected through a geoprobe if possible to minimize the amount of soil cuttings. Any soil cuttings or purge water shall be containerized and held until the groundwater/soil samples are analyzed.

In addition to the soil sampling, ECS also conducted indoor air ("air") monitoring at the Site residence. The air sample results were found to be below the US EPA action levels for each contaminant detected in samples collected from the kitchen and garage. Although, the Report from ECS indicates that various action levels or ranges (see page 5 of 9 of the Report) exist for VOCs in new buildings, the action level that the Branch uses is the toxic action level. For xylene that action level is 7000 ug/cubic meter. However, since other VOCs are present in the sample that affect human target organs the same as xylene, the concentrations of these compounds and their action levels must be adjusted to determine a final action level for each sample collected. That action level for xylene is 1400 ug/cubic meter for the kitchen sample and 1750 ug/cubic meter for the garage sample. When these final action levels are compared to the air sample results from the kitchen and garage, all contaminants of concern are below action levels.

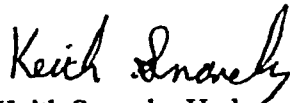
Even though the air sample results indicate that xylene is below action levels, a second indoor air sampling event must be conducted. The air samples from this second event will provide additional data to determine if the VOCs detected are remaining nearly consistent. These indoor air results do not necessarily indicate that the elevated xylenes came from the xylene driveway cleanup only but show a combination of VOCs existing in the house prior to and during the tests. These VOCs can result from off-gassing of carpeting from new homes, paints and varnishes, and VOCs from gasoline cans.

To be consistent with the first indoor air tests, similar tests should be conducted in the kitchen and garage for a second sampling event. ECS must also collect additional samples in the upstairs bedrooms.

Please provide a brief work plan for review and approval prior to conducting this Phase II work at the Site. The work plan should include a brief description of the installation of the soil boring and the second air sampling event. Since the residents have been temporarily relocated, and wish to return home, please submit the brief plan for conducting the air sampling so the testing can begin as soon as possible. In addition to the tasks above, please submit a copy of the MSDS sheet for the compound used on the driveway at the Site and the soil sample results and manifest(s) for the disposal of soil removed from the Site and stored at the Yard Nique property.

If you have any questions, I can be reached at (919) 508-8479.

Sincerely,



Keith Snavelly, Hydrogeologist
Inactive Hazardous Sites Branch
Superfund Section

cc: Ryan Conchilla, ECS
Mark Brown, ECS
Stephanie Knichel, 223 Rope Walk Court

Snavely, Keith

From: Keith Snavely [Keith.Snavely@ncmail.net]
Sent: Monday, October 22, 2007 1:19 PM
To: Skalka, Rosemary
Subject: Re: Your review of ECS Report
Attachments: Assessment Review_223 Rope Walk Court.pdf

Rosemary,

I am sending it to you now via PDF file. Do you want to review it before I email it to ECS staff and Stephanie Knichel?

Keith

Skalka, Rosemary wrote:
Keith,

Good afternoon. When you spoke with me last Friday, you indicated that you had completed your review of ECS's report on 223 Rope Walk Ct, Cary, and that you expected to send me and ECS your comments today. Do you still expect to get that to us today? If possible, I would like to receive it via email so that I can immediately forward it to others involved. Thank you very much.

Rosemary Skalka
Director of Customer Service
KB Home / Raleigh
(919) 424-1680 (office)
(919) 669-9687 (mobile)
rskalka@kbhome.com

Snavely, Keith

From: Skalka, Rosemary [rskalka@kbhome.com]
Sent: Monday, October 22, 2007 12:09 PM
To: Keith Snavely
Subject: Your review of ECS Report

Keith,

Good afternoon. When you spoke with me last Friday, you indicated that you had completed your review of ECS's report on 223 Rope Walk Ct, Cary, and that you expected to send me and ECS your comments today. Do you still expect to get that to us today? If possible, I would like to receive it via email so that I can immediately forward it to others involved. Thank you very much.

Rosemary Skalka
Director of Customer Service
KB Home / Raleigh
(919) 424-1680 (office)
(919) 669-9687 (mobile)
rskalka@kbhome.com

Snavely, Keith

From: RConchilla [RConchilla@ecslimited.com]
Sent: Monday, October 22, 2007 10:22 AM
To: Keith Snavely
Subject: 15416-C
Attachments: Xylene Info.PDF

Keith,

I got your voice message, I apologize for not getting back to you sooner. Attached is some information I found regarding the chemical used on the driveways in Twin Lakes. Please let me know what other info you need.

Ryan J. Conchilla

Senior Environmental Scientist

Phase I Team Leader

ECS Carolinas, LLP

9001 Glenwood Avenue

Raleigh, NC 27617-7505

(919) 861-9862 (direct voice)

(919) 291-5744 (mobile)

(919) 861-9910 (office)

(919) 861-9911 (office fax)

email: rconchilla@ecslimited.com

The ECS Group of Companies

ENR #62 Pure Design Firm

ENR #96 Top Design Firm

ENR #177 Top Environmental Firm

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Household Products Database

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Specialized Information Services

[Home](#)[Products](#)[Ingredients](#)[MSDS](#)[Browse by
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Brand Information

Brand Name: Xylol Klean Strip Cleaner

Form: liquid

Product Category: Home maintenance >> Paint >> stripper

Customer Service No.: 901-775-0100

Date Entered: 1997-05-01

Related Items: Products with similar usage in this database

Manufacturer

Manufacturer: Barr & Co., Inc., W.M.

Address: 2101 Channel Avenue

City: Memphis

State: TN

Zip Code: 37501

Telephone Number: 901-775-0100

Fax Number: 800-621-9508

Toll Free Number: 800-235-3546

Date Info Verified: 2007-02-07

Related Items: Products by this manufacturer

Health Effects

[Search TOXNET](#)

Enter text or highlight term...

The following information (Health Effects, Handling/Disposal, and Ingredients) is taken from the product label and/or the Material Safety Data Sheet (MSDS) prepared by the manufacturer. The National Library of Medicine does not evaluate information from the product label or the Material Safety Data Sheet.

Warning from Product Label: Danger! Keep away from heat, sparks, flame and all other sources of ignition. Do not smoke. Extinguish all flames, pilot lights, and turn off stoves, heaters, electric motors and all other sources of ignition during use and until all vapors are gone. Beware of static electricity that may be generated by synthetic clothing and other sources. Whenever possible, use outdoors in an open air area. Do not use in areas where vapor can accumulate and concentrate such as basements, bathrooms or small enclosed areas. **USE ONLY WITH ADEQUATE VENTILATION TO PREVENT BUILD UP OF VAPOR.** Open all windows and doors. Use only with a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headaches, nausea or eye watering - **STOP** - ventilation is inadequate. Leave area immediately. Danger! Harmful or fatal if swallowed. Vapor harmful. Eye irritant. Contains Xylene. Reports have associated repeated and prolonged over exposure to solvents with neurological and other physiological damage. Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal. For further information, refer to the Material Safety Data Sheet. this product should not be used frequently or on a regular basis without properly engineered air control systems designed to prevent exceeding appropriate TLV. It is intended for occasional use only. Do not take internally. Avoid prolonged or repeated breathing of vapor or

spray mist. Avoid contact with eyes and prolonged contact with skin. Prolonged contact with skin may cause irritation. Rinse off skin after each use. Close container after each use. Do not reuse container. For OSHA controlled workplaces and other regular users- Use only with adequate ventilation under engineered air control systems designed to prevent exceeding approved TLV for occasional use. Where engineered control is not feasible, use properly maintained and properly fitted NIOSH approved respirators for organic sealant vapors. A dust mask does not provide protection against vapors. First Aid: If swallowed, do not induce vomiting. Call your poison control center, hospital emergency room or physician immediately. In case of eye contact, immediately flush with water for at least 15 minutes. If irritation persists, get medical attention. Keep out of reach of children.

Acute Health Effects: From MSDS

Inhalation: Vapor harmful. May cause dizziness, headache, irritation of respiratory tract, weakness, drowsiness, depression of central nervous system, and watering of eyes. Severe overexposure may cause unconsciousness, anesthesia, irregular heartbeat, and death. Intentional misuse of this product by deliberately concentrating and inhaling can be harmful or fatal.

Eye Contact: This material is an eye irritant.

Skin Contact: May be absorbed through the skin. May cause irritation.

Ingestion: Harmful or fatal if swallowed. May cause nausea, vomiting, gastrointestinal irritation, and diarrhea.

Diseases of the skin, liver, and kidneys may be aggravated by exposure to this product.

Chronic Health Effects: MSDS: Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. Prolonged or repeated contact may cause dermatitis. May cause skin irritation, permanent central nervous system changes, kidney damage, and liver damage.

Ingredients in this product are not listed on California's Prop 65 list: "Chemicals known to the State to cause cancer or reproductive toxicity."

Carcinogenicity: MSDS: Ingredients in this product are not listed on California's Prop 65 list: "Chemicals known to the State to cause cancer or reproductive toxicity."

The components in this mixture are not listed as carcinogens by NTP, IARC and OSHA.

Health Rating: 2

Flammability Rating: 3

Reactivity Rating: 0

HMIS Rating Scale: 0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe;
N = No information provided by manufacturer; * = Chronic Health Hazard

MSDS Date: 1992-07-20

Handling/Disposal

Handling: MSDS: Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near flames or at elevated temperatures. Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of container according to all regulations. Do not reuse this container.

Disposal: MSDS: Dispose of in accordance with applicable federal, state, and local regulations.

Ingredients from MSDS/Label

Chemical	CAS No / Unique ID	Percent
<u>Ethylbenzene</u>	000100-41-4	15-20
<u>Xylene (mixed isomers)</u>	001330-20-7	80-85

Note: Brand names are trademarks of their respective holders.

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Last updated: April 23, 2007

NIOSH Pocket Guide to Chemical Hazards

o-Xylene			CAS 95-47-6
C ₆ H ₄ (CH ₃) ₂			RTECS ZE2450000
Synonyms & Trade Names 1,2-Dimethylbenzene; ortho-Xylene; o-Xylol			DOT ID & Guide 1307 130
Exposure Limits	NIOSH REL: TWA 100 ppm (435 mg/m ³) ST 150 ppm (655 mg/m ³)		
	OSHA PEL†: TWA 100 ppm (435 mg/m ³)		
IDLH 900 ppm See: 95476		Conversion 1 ppm = 4.34 mg/m ³	
Physical Description Colorless liquid with an aromatic odor.			
MW: 106.2	BP: 292°F	FRZ: -13°F	Sol: 0.02%
VP: 7 mmHg	IP: 8.56 eV		Sp.Gr: 0.88
Fl.P: 90°F	UEL: 6.7%	LEL: 0.9%	
Class IC Flammable Liquid: Fl.P. at or above 73°F and below 100°F.			
Incompatibilities & Reactivities Strong oxidizers, strong acids			
Measurement Methods NIOSH 1501, 3800; OSHA 1002 See: NMAM or OSHA Methods			
Personal Protection & Sanitation Skin: Prevent skin contact Eyes: Prevent eye contact Wash skin: When contaminated Remove: When wet (flammable) Change: No recommendation		First Aid (See procedures) Eye: Irrigate immediately Skin: Soap wash promptly Breathing: Respiratory support Swallow: Medical attention immediately	
Important additional information about respirator selection Respirator Recommendations NIOSH/OSHA Up to 900 ppm: (APF = 10) Any chemical cartridge respirator with organic vapor cartridge(s)*/(APF = 25) Any powered, air-purifying respirator with organic vapor cartridge(s)*/(APF = 10) Any supplied-air respirator*/(APF = 50) Any self-contained breathing apparatus with a full facepiece Emergency or planned entry into unknown concentrations or IDLH conditions: (APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode/(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus Escape: (APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister/Any appropriate escape-type, self-contained breathing apparatus			
Exposure Routes inhalation, skin absorption, ingestion, skin and/or eye contact			
Symptoms Irritation eyes, skin, nose, throat; dizziness, excitement, drowsiness, incoordination, staggering gait; corneal vacuolization; anorexia, nausea, vomiting, abdominal pain; dermatitis			
Target Organs Eyes, skin, respiratory system, central nervous system, gastrointestinal tract, blood, liver, kidneys			

See also: INTRODUCTION See ICSC CARD: 0084 See MEDICAL TESTS: 0243

Xylene (o-, m-, p-isomers)

IDLH Documentation

CAS numbers: 95476 (o-isomer), 108383 (m-isomer), 106423 (p-isomer)

NIOSH REL: 100 ppm (435 mg/m³) TWA, 150 ppm (655 mg/m³) STEL

Current OSHA PEL: 100 ppm (435 mg/m³) TWA

1989 OSHA PEL: 100 ppm (435 mg/m³) TWA, 150 ppm (655 mg/m³) STEL

1993/1994 ACGIH TLV: 100 ppm (434 mg/m³) TWA, 150 ppm (651 mg/m³) STEL

Description of substance: Colorless liquid with an aromatic odor.

LEL: . . 0.91.1% (10% LEL, 9001,100 ppm)

Original (SCP) IDLH: 1,000 ppm

Basis for original (SCP) IDLH: The chosen IDLH is based on the following statements by ANSI [1971]. "Exposure at 1,000 ppm for 5 minutes or less will probably allow self-rescue with no irreversible injury. Higher concentrations or longer exposure periods can cause eye and respiratory tract irritation, and the beginning of narcotic effects which may limit self-rescue ability. This information is based on human experience and extrapolation from animal data."

Existing short-term exposure guidelines: National Research Council [NRC 1984] Emergency Exposure Guidance Levels (EEGLs):

1-hour EEGL: 200 ppm

24-hour EEGL: 100 ppm

ACUTE TOXICITY DATA:

Lethal concentration data:

Species	Reference	LC ₅₀ (ppm)	LC _{Lo} (ppm)	Time	Adjusted 0.5-hr LC (CF)	Derived value
o-Xylene Rat	Cameron et al. 1938	-----	6,125	12 hr	73,500 ppm (2.9)	7,350 ppm
o-Xylene Human	Gekkan Yakuji 1980	-----	6,125	12 hr	73,500 ppm (2.9)	7,350 ppm
m-Xylene Mouse	Cameron et al. 1938	-----	2,010	24 hr	7,236 ppm (3.6)	724 ppm
m-Xylene Rat	Smyth et al. 1962	-----	8,000	4 hr	16,000 ppm (2.0)	1,600 ppm

p-Xylene Mouse	Arch Exp Pathol Pharmacol 1929	-----	3,401	?	?	?
p-Xylene Rat	Harper et al. 1977	4,550	-----	4 hr	9,100 ppm (2.0)	910 ppm
Xylene Human	Morley et al. 1970	-----	10,000	18 hr	33,000 ppm (3.3)	3,300 ppm
Xylene Rat	NPIRI 1974	5,000	-----	4 hr	10,000 ppm (2.0)	1,000 ppm
Xylene G. pig	Smyth and Smyth 1928	-----	450	?	?	?

Other animal data: RD50 (mouse): 1,467 ppm [DeCaurriz et al. 1981].

Other human data: It has been reported that 1,000 ppm for 5 minutes or less will probably allow self-rescue with no irreversible injury [ANSI 1971]. Volunteers found 200 ppm to be definitely irritating to the eyes, nose, and throat [Nelson et al. 1943]. Reaction time was not affected in 23 volunteers exposed to 100 or 200 ppm for 3 to 7 hours [Ogata et al. 1970]. No noticeable changes in reaction time or short-term memory tests were seen in 15 volunteers exposed to 100 or 300 ppm for 70 minutes [Gamberale et al. 1978].

Revised IDLH: 900 ppm

Basis for revised IDLH: The revised IDLH is 900 ppm based on acute inhalation toxicity data in animals [Cameron et al. 1938; DeCaurriz et al. 1981; Harper et al. 1977; NPIRI 1974]. Although this may be a conservative value due to the lack of relevant acute toxicity data for workers exposed to concentrations above 300 ppm, this value would have otherwise been selected for safety considerations (i.e., being 10% of the lower explosive limit of 0.9% for xylene).

REFERENCES:

1. Arch Exp Pathol Pharmacol [1929]. Toxicity of various hydrocarbon vapors; 143:223233 (in German).
2. ANSI [1971]. American national standard, acceptable concentrations of xylene (dimethyl benzene). New York, NY: American National Standards Institute, Inc., ANSI Z37.101971, p. 7.
3. Cameron GR, Paterson JLH, de Saram GSW, Thomas JC [1938]. The toxicity of some methyl derivatives of benzene with special reference to pseudocumene and heavy coal tar naphtha. J Pathol Bacteriol 46:95107.
4. DeCaurriz JC, Micillino JC, Bonnet P, Guenier JP [1981]. Sensory irritation caused by various industrial airborne chemicals. Toxicol Lett 9(2):137143.
5. Gamberale F, Annwall G, Hultengren M [1978]. Exposure to xylene and ethylbenzene. III. Effects on central nervous functions. Scand J Work Environ Health 4:204211.
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7. Harper C, Drew RT, Fouts JR [1977]. Benzene and p-xylene: a comparison of inhalation toxicities and in vitro hydroxylations. In: Biological reactive intermediates, formulation, toxicity, and inactivation. Proceedings of the International Conference, Twiku, Finland, 1975. New York, NY: Plenum Publishing Corporation, pp. 302311.
8. Morley R, Eccleston DW, Douglas CP, Greville WEJ, Scott DJ, Anderson J [1970]. Xylene poisoning: a report on one file://D:\nioshdb\idlh\95476.htm

fatal case and two cases of recovery after prolonged unconsciousness. Br Med J 3:442443.

9. Nelson KW, Ege JF, Ross M, Woodman LE, Silverman L [1943]. Sensory response to certain industrial solvent vapors. J Ind Hyg Toxicol 25(7):282285.

10. NPIRI [1974]. Raw materials data handbook, physical and chemical properties, fire hazard and health hazard data. Vol. 1. Organic solvents. Bethlehem, PA: National Printing Ink Research Institute, p. 123.

11. NRC [1984]. Emergency and continuous exposure limits for selected airborne contaminants. Vol. 2. Washington, DC: National Academy Press, Committee on Toxicology, Board on Toxicology and Environmental Health Hazards, Commission on Life Sciences, National Research Council, pp. 113123.

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13. Smyth HF, Smyth HF Jr [1928]. Inhalation experiments with certain lacquer solvents. J Ind Hyg 10(8):261271.

14. Smyth HF, Carpenter CP, Weil CS, Pozzani UC, Striegel JA [1962]. Rangefinding toxicity data: list VI. Am Ind Hyg Assoc J 23:95107.

Go back to the Documentation for Immediately Dangerous To Life or Health Concentrations (IDLHs)

This page was last updated : 8/16/96

Go back to the NIOSH home page



or to the CDC home page.



NIOSH Pocket Guide to Chemical Hazards

m-Xylene			CAS 108-38-3
$C_6H_4(CH_3)_2$			RTECS ZE2275000
Synonyms & Trade Names 1,3-Dimethylbenzene; meta-Xylene; m-Xylol			DOT ID & Guide 1307 130
Exposure Limits	NIOSH REL: TWA 100 ppm (435 mg/m ³) ST 150 ppm (655 mg/m ³)		
	OSHA PEL†: TWA 100 ppm (435 mg/m ³)		
IDLH 900 ppm See: 95476		Conversion 1 ppm = 4.34 mg/m ³	
Physical Description Colorless liquid with an aromatic odor.			
MW: 106.2	BP: 282°F	FRZ: -54°F	Sol: Slight
VP: 9 mmHg	IP: 8.56 eV		Sp.Gr: 0.86
Fl.P: 82°F	UEL: 7.0%	LEL: 1.1%	
Class IC Flammable Liquid: Fl.P. at or above 73°F and below 100°F.			
Incompatibilities & Reactivities Strong oxidizers, strong acids			
Measurement Methods NIOSH 1501, 3800; OSHA 1002 See: NMAM or OSHA Methods			
Personal Protection & Sanitation Skin: Prevent skin contact Eyes: Prevent eye contact Wash skin: When contaminated Remove: When wet (flammable) Change: No recommendation		First Aid (See procedures) Eye: Irrigate immediately Skin: Soap wash promptly Breathing: Respiratory support Swallow: Medical attention immediately	
Important additional information about respirator selection Respirator Recommendations NIOSH/OSHA Up to 900 ppm: (APF = 10) Any chemical cartridge respirator with organic vapor cartridge(s)*/(APF = 25) Any powered, air-purifying respirator with organic vapor cartridge(s)*/(APF = 10) Any supplied-air respirator*/(APF = 50) Any self-contained breathing apparatus with a full facepiece Emergency or planned entry into unknown concentrations or IDLH conditions: (APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode/(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus Escape: (APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister/Any appropriate escape-type, self-contained breathing apparatus			
Exposure Routes inhalation, skin absorption, ingestion, skin and/or eye contact			
Symptoms Irritation eyes, skin, nose, throat; dizziness, excitement, drowsiness, incoordination, staggering gait; corneal vacuolization; anorexia, nausea, vomiting, abdominal pain; dermatitis			
Target Organs Eyes, skin, respiratory system, central nervous system, gastrointestinal tract, blood, liver, kidneys			

See also: INTRODUCTION See ICSC CARD: 0085 See MEDICAL TESTS: 0243

NIOSH Pocket Guide to Chemical Hazards

p-Xylene		CAS 106-42-3
$C_6H_4(CH_3)_2$		RTECS ZE2625000
Synonyms & Trade Names 1,4-Dimethylbenzene; para-Xylene; p-Xylol		DOT ID & Guide 1307 130
Exposure Limits	NIOSH REL: TWA 100 ppm (435 mg/m ³) ST 150 ppm (655 mg/m ³)	
	OSHA PEL†: TWA 100 ppm (435 mg/m ³)	
IDLH 900 ppm See: 95476		Conversion 1 ppm = 4.41 mg/m ³
Physical Description Colorless liquid with an aromatic odor. [Note: A solid below 56°F.]		
MW: 106.2	BP: 281°F	FRZ: 56°F
VP: 9 mmHg	IP: 8.44 eV	Sp.Gr: 0.86
FLP: 81°F	UEL: 7.0%	LEL: 1.1%
Class IC Flammable Liquid: FLP. at or above 73°F and below 100°F.		
Incompatibilities & Reactivities Strong oxidizers, strong acids		
Measurement Methods NIOSH 1501, 3800; OSHA 1002 See: NMAM or OSHA Methods		
Personal Protection & Sanitation Skin: Prevent skin contact Eyes: Prevent eye contact Wash skin: When contaminated Remove: When wet (flammable) Change: No recommendation		First Aid (See procedures) Eye: Irrigate immediately Skin: Soap wash promptly Breathing: Respiratory support Swallow: Medical attention immediately
Important additional information about respirator selection Respirator Recommendations NIOSH/OSHA Up to 900 ppm: (APF = 10) Any chemical cartridge respirator with organic vapor cartridge(s)*/(APF = 25) Any powered, air-purifying respirator with organic vapor cartridge(s)*/(APF = 10) Any supplied-air respirator*/(APF = 50) Any self-contained breathing apparatus with a full facepiece Emergency or planned entry into unknown concentrations or IDLH conditions: (APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode/(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus Escape: (APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister/Any appropriate escape-type, self-contained breathing apparatus		
Exposure Routes inhalation, skin absorption, ingestion, skin and/or eye contact		
Symptoms Irritation eyes, skin, nose, throat; dizziness, excitement, drowsiness, incoordination, staggering gait; corneal vacuolization; anorexia, nausea, vomiting, abdominal pain; dermatitis		
Target Organs Eyes, skin, respiratory system, central nervous system, gastrointestinal tract, blood, liver, kidneys		

See also: INTRODUCTION. See ICSC CARD: 0086 See MEDICAL TESTS: 0243

Xylene (o-, m-, p-isomers)

IDLH Documentation

CAS numbers: 95476 (o-isomer), 108383 (m-isomer), 106423 (p-isomer)

NIOSH REL: 100 ppm (435 mg/m³) TWA, 150 ppm (655 mg/m³) STEL

Current OSHA PEL: 100 ppm (435 mg/m³) TWA

1989 OSHA PEL: 100 ppm (435 mg/m³) TWA, 150 ppm (655 mg/m³) STEL

1993/1994 ACGIH TLV: 100 ppm (434 mg/m³) TWA, 150 ppm (651 mg/m³) STEL

Description of substance: Colorless liquid with an aromatic odor.

LEL: . . 0.91.1% (10% LEL, 9001,100 ppm)

Original (SCP) IDLH: 1,000 ppm

Basis for original (SCP) IDLH: The chosen IDLH is based on the following statements by ANSI [1971]. "Exposure at 1,000 ppm for 5 minutes or less will probably allow self-rescue with no irreversible injury. Higher concentrations or longer exposure periods can cause eye and respiratory tract irritation, and the beginning of narcotic effects which may limit self-rescue ability. This information is based on human experience and extrapolation from animal data."

Existing short-term exposure guidelines: National Research Council [NRC 1984] Emergency Exposure Guidance Levels (EEGLs):

1-hour EEGL: 200 ppm

24-hour EEGL: 100 ppm

ACUTE TOXICITY DATA:

Lethal concentration data:

Species	Reference	LC ₅₀ (ppm)	LC _{Lo} (ppm)	Time	Adjusted 0.5-hr LC (CF)	Derived value
o-Xylene Rat	Cameron et al. 1938	-----	6,125	12 hr	73,500 ppm (2.9)	7,350 ppm
o-Xylene Human	Gekkan Yakuji 1980	-----	6,125	12 hr	73,500 ppm (2.9)	7,350 ppm
m-Xylene Mouse	Cameron et al. 1938	-----	2,010	24 hr	7,236 ppm (3.6)	724 ppm
m-Xylene Rat	Smyth et al. 1962	-----	8,000	4 hr	16,000 ppm (2.0)	1,600 ppm

p-Xylene Mouse	Arch Exp Pathol Pharmacol 1929	-----	3,401	?	?	?
p-Xylene Rat	Harper et al. 1977	4,550	-----	4 hr	9,100 ppm (2.0)	910 ppm
Xylene Human	Morley et al. 1970	-----	10,000	18 hr	33,000 ppm (3.3)	3,300 ppm
Xylene Rat	NPIRI 1974	5,000	-----	4 hr	10,000 ppm (2.0)	1,000 ppm
Xylene G. pig	Smyth and Smyth 1928	-----	450	?	?	?

Other animal data: RD50 (mouse): 1,467 ppm [DeCaurriz et al. 1981].

Other human data: It has been reported that 1,000 ppm for 5 minutes or less will probably allow self-rescue with no irreversible injury [ANSI 1971]. Volunteers found 200 ppm to be definitely irritating to the eyes, nose, and throat [Nelson et al. 1943]. Reaction time was not affected in 23 volunteers exposed to 100 or 200 ppm for 3 to 7 hours [Ogata et al. 1970]. No noticeable changes in reaction time or short-term memory tests were seen in 15 volunteers exposed to 100 or 300 ppm for 70 minutes [Gamberale et al. 1978].

Revised IDLH: 900 ppm

Basis for revised IDLH: The revised IDLH is 900 ppm based on acute inhalation toxicity data in animals [Cameron et al. 1938; DeCaurriz et al. 1981; Harper et al. 1977; NPIRI 1974]. Although this may be a conservative value due to the lack of relevant acute toxicity data for workers exposed to concentrations above 300 ppm, this value would have otherwise been selected for safety considerations (i.e., being 10% of the lower explosive limit of 0.9% for xylene).

REFERENCES:

1. Arch Exp Pathol Pharmacol [1929]. Toxicity of various hydrocarbon vapors; 143:223233 (in German).
2. ANSI [1971]. American national standard, acceptable concentrations of xylene (dimethyl benzene). New York, NY: American National Standards Institute, Inc., ANSI Z37.101971, p. 7.
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fatal case and two cases of recovery after prolonged unconsciousness. Br Med J 3:442443.

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Go back to the Documentation for Immediately Dangerous To Life or Health Concentrations (IDLHs)

This page was last updated : 8/16/96

Go back to the NIOSH home page



or to the CDC home page.



Snavely, Keith

From: Skalka, Rosemary [rskalka@kbhome.com]
Sent: Friday, October 19, 2007 10:22 AM
To: Keith Snavely
Subject: Your Letter

Keith,

Thank you for speaking with me this morning. You do have the correct email address for me. My computer had quarantined your mail, but I have corrected that, so I will not have a problem receiving mail from you now.

I will be looking for your letter today. I will forward it to Mr. & Mrs. Knichel and I will call her. As you and I discussed, I will also offer to her that she can speak with you directly for further clarification. Thank you very much for offering to do this. I am sure helps ease her mind.

Sincerely,

Rosemary Skalka
Director of Customer Service
KB Home / Raleigh
(919) 424-1680 (office)
(919) 669-9687 (mobile)
rskalka@kbhome.com

Snavely, Keith

From: RConchilla [RConchilla@ecslimited.com]
Sent: Wednesday, October 17, 2007 4:16 PM
To: Keith Snavely
Subject: Additional Work Plan- 15416
Attachments: Additional Work Plan_15416.pdf; KB Home - Twin Lakes Community.pdf

Attached please find the Work Plan and Site Map for the additional 20 residences located in the Twin Lakes Subdivision, Morrisville, NC. Please let me know what comments and/or questions you have.

Ryan J. Conchilla

Senior Environmental Scientist

Phase I Team Leader

ECS Carolinas, LLP

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Raleigh, NC 27617-7505

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(919) 291-5744 (mobile)

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The ECS Group of Companies
ENR #62 Pure Design Firm
ENR #96 Top Design Firm
ENR #177 Top Environmental Firm

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ECS CAROLINAS, LLP

Geotechnical • Construction Materials • Environmental

Mr. Keith Snavelly
North Carolina Department of Environment and Natural Resources
Division of Waste Management, Superfund Section
Inactive Hazardous Sites Branch
401 Oberlin Road, Ste. 150
1646 Mail Service Center
Raleigh, NC, 27699-1646

October 17, 2007

RE: Work Plan
Twenty Additional Single-family Residences
Morrisville, Wake County, North Carolina
ECS Project Number 06.15416

Dear Mr. Snavelly:

ECS Carolinas, LLP (ECS), on behalf of KB Home, appreciates the opportunity to submit this Work Plan for limited soil sampling services at twenty additional residences located in the Twin Lakes Sub-division, Morrisville, Wake County, North Carolina. The residence information is detailed below in Table 1. This Work Plan is provided in response to our discussions via telephone on Tuesday, October 15, 2007 and is prepared in accordance with the North Carolina Department of Environment and Natural Resources, Division of Waste Management, Superfund Section, Inactive Hazardous Sites Branch, (IHSB) *Guidelines for Assessment and Cleanup (Guidelines)*, August 2007.

Thank you for the opportunity to submit this Work Plan and look forward to your prompt approval of our submittal. Please contact us at 919.861.9910, rconchilla@ecslimited.com or smbrown@ecslimited.com with any questions or comments.

Sincerely,
ECS Carolinas, LLP

Ryan Conchilla
Senior Environmental Scientist

Mark Brown, L.G., P.G., RSM
Principal Geologist
Environmental Services Department Manager

Attachment 1: Twin Lakes Subdivision Map

Phase I Remedial Investigation Work Plan
Twenty Additional Residences
Twin Lakes Subdivision
Morrisville, Wake County, North Carolina

**WORK PLAN FOR THE
PHASE I REMEDIAL INVESTIGATION
TWENTY ADDITIONAL RESIDENCES
TWIN LAKES SUBDIVISION
MORRISVILLE, WAKE COUNTY, NORTH CAROLINA**

Prepared for:

KB Home, Raleigh-Durham Inc.
2610 Wycliff Road
Suite 102
Raleigh, North Carolina 27607

Prepared by:

ECS Carolinas, LLP.
9001 Glenwood Avenue
Raleigh, NC 27616



Ryan Conchilla
Senior Environmental Scientist
Environmental Services Department



Stephen Mark Brown, LG, PG, RSM
Principal Geologist
Environmental Services Dept. Manager

October 17, 2007

**Phase I Remedial Investigation Work Plan
Twenty Additional Residences
Twin Lakes Subdivision
Morrisville, Wake County, North Carolina**

SCOPE OF SERVICES

ECS has recently submitted a Phase I Work Plan in accordance with the IHSB *Guidelines for Assessment and Cleanup (Guidelines)* for Phase I Remedial Investigation activities located at 223 Ropewalk Court (Knichel residence), Morrisville, NC, due to strong suspect odors noted by the resident after the concrete driveway was sealed by KB Home contractors on September 18th and 19th, 2007.

ECS personnel have recently been informed by representatives of KB Home that twenty additional single-family residences located in the same Twin Lakes Sub-division may have also received similar driveway sealing procedures. It is ECS' understanding that the additional residences are listed below:

Table 1

<u>LOT</u>	<u>ADDRESS</u>
21	504 Tranquil Sound Drive
27	518 Tranquil Sound Drive
30	524 Tranquil Sound Drive
220	402 Otter Cliff Way
226	549 Front Ridge drive
228	553 Front Ridge drive
229	554 Front Ridge drive
230	552 Front Ridge drive
237	538 Front Ridge drive
322	646 Piper Stream Circle
323	644 Piper Stream Circle
505	112 Singer Way
535	404 Elm Farm Place
538	403 Elm Farm Place
548	555 Abbey Fields Loop
551	556 Abbey Fields Loop
558	540 Abbey Fields Loop
563	530 Abbey Fields Loop
564	528 Abbey Fields Loop
569	516 Abbey Fields Loop

The objectives of the RI are: (1) complete the assessment of shallow suspect soils located adjacent to the concrete driveways at each individual residence (2) identify remedial goals; and (3) compile, evaluate, and present the results of this assessment in the RI Report. To accomplish this, ECS proposes the following tasks:

**Phase I Remedial Investigation Work Plan
Twenty Additional Residences
Twin Lakes Subdivision
Morrisville, Wake County, North Carolina**

Task 1: Preparation of a Health and Safety Plan

A Health and Safety Plan (HASP) is required by federal law before beginning exploratory work on a site. ECS will prepare a HASP Plan for this project, which is intended to cover ECS personnel for the work outlined in this proposal. Our HASP will not cover others for which ECS is not responsible.

Task 2: Identification of Areas of Concern

The general locations where targeted compounds are suspected to be located are on both sides the driveway located at each individual residence. Additional studies may be required to delineate the extent of contamination in each AOC that include:

AOC 1- Soils located adjacent to the concrete driveway at each residence

AOC 2- Stained and/or stressed vegetation in the general vicinity (if noted).

Task 3: Soil Sampling Event

ECS proposes to collect four to five soil samples at each area of concern (AOC) located on each of the twenty single-family residences identified by representatives of KB Home. ECS personnel may elect to increase and/or decrease the number of samples collected based on visual and olfactory observations made in the field. The initial Areas of Concern (AOC) for each of these residences will typically be located along both sides of the driveway. Additionally, other areas located on the properties which exhibit visual signs of stained soils and/or stressed vegetation will also be sampled as an AOC. The soil samples will be collected with a stainless-steel hand auger at approximately six to twelve inches below the ground surface (bgs). Soil samples will be collected at various locations and depths and placed into zip-lock bags. The samples will then be allowed time to volatilize and then screened for VOC vapor concentrations in the sample bag headspace using a photo ionization detector (PID). The soil sample with the highest VOC vapor concentration will then be placed into laboratory-provided containers, placed on ice for submittal to a State of North Carolina-certified laboratory for VOC analysis using Environmental Protection Agency (EPA) Method 8260.

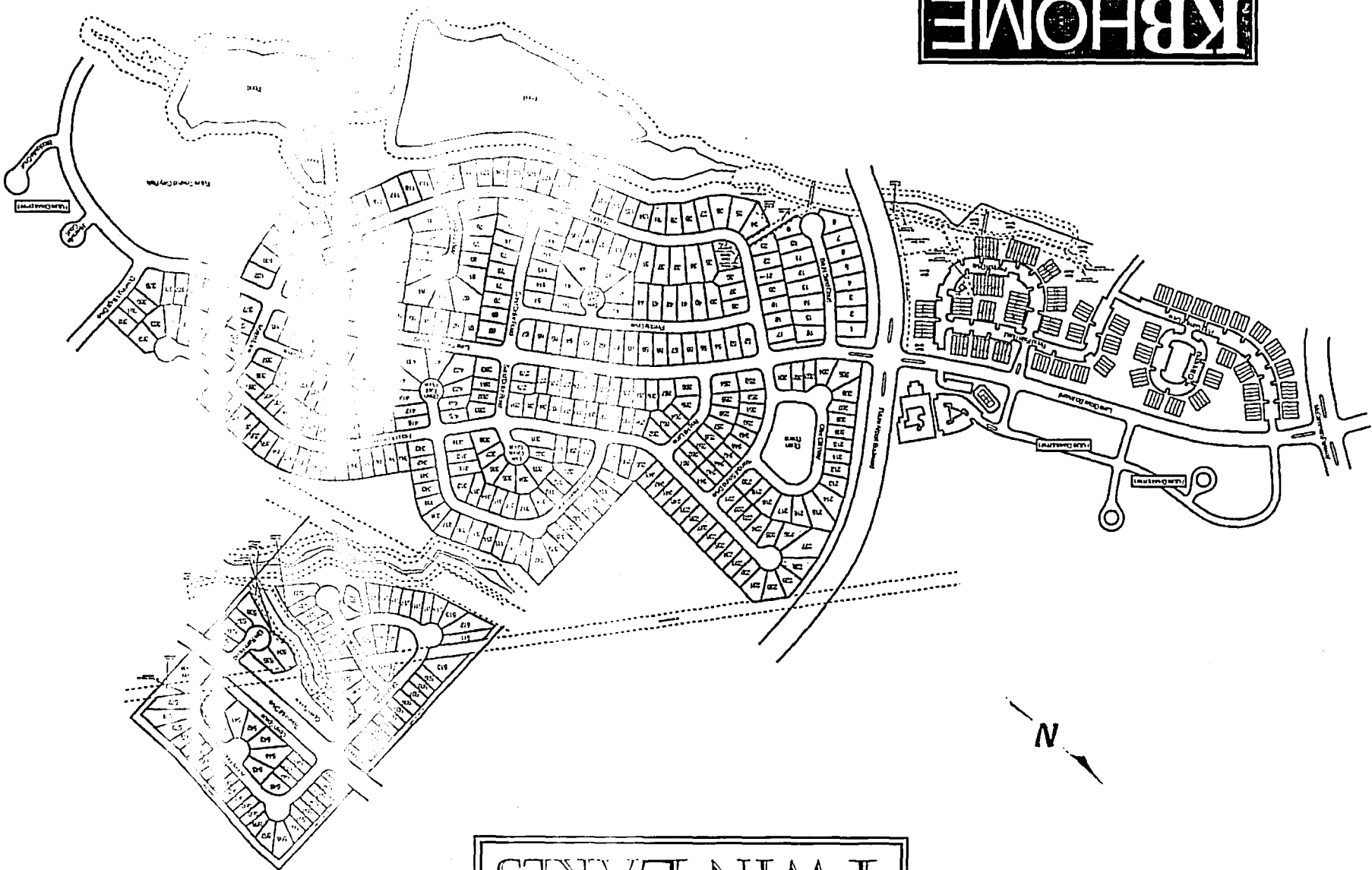
Task 4: Reporting

ECS will provide **one Remedial Investigation Report (RI Report) (in accordance with Section 3.0 of the *Guidelines*)** for all 20 sites the IHSB. The IHSB will determine what steps, if any, will be taken for further assessment or remediation of the site.



Copyright © 2006 KB HOME. All Rights Reserved. Prices/terms subject to change, please call for details. Restrictions and limitations may apply. See Agent for details. Map not to scale.

KBHOME



TWIN LAKES

Snavely, Keith

From: DMoyer [DMoyer@ecslimited.com]
Sent: Tuesday, October 16, 2007 3:34 PM
To: <drennells@kbhome.com>; <tcope@kbhome.com>; <keith.snavely@ncmail.net>
Cc: RConchilla; SMBrown
Subject: ECS Project No. 15416
Attachments: 15416_FINAL Report.pdf

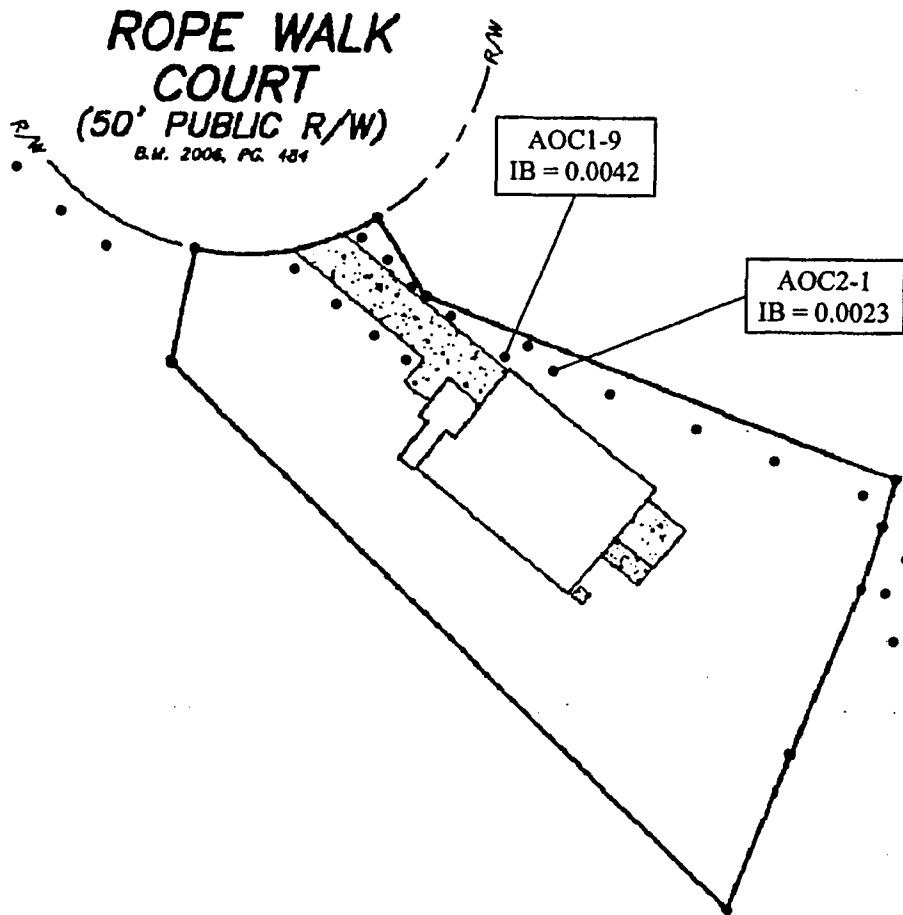
Attached please find the Phase I Remedial Investigation Report for 223 Ropewalk Court (Knichel Residence) in Morrisville, NC. If you have any questions, please contact Ryan Conchilla at (919) 861-9862 or via e-mail at rconchilla@ecslimited.com.

Darlene Moyer
Environmental Technician

ECS Carolinas, LLP
9001 Glenwood Avenue
Raleigh, NC 27617-7505
(919) 861-9851 [Direct]
(919) 861-9910 [Office]
(800) 327-5832 [Toll Free]
(919) 861-9911 [Fax]

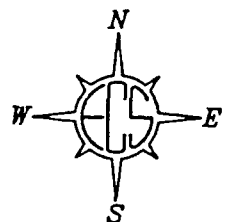
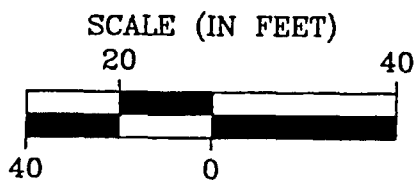
e-mail: dmoyer@ecslimited.com
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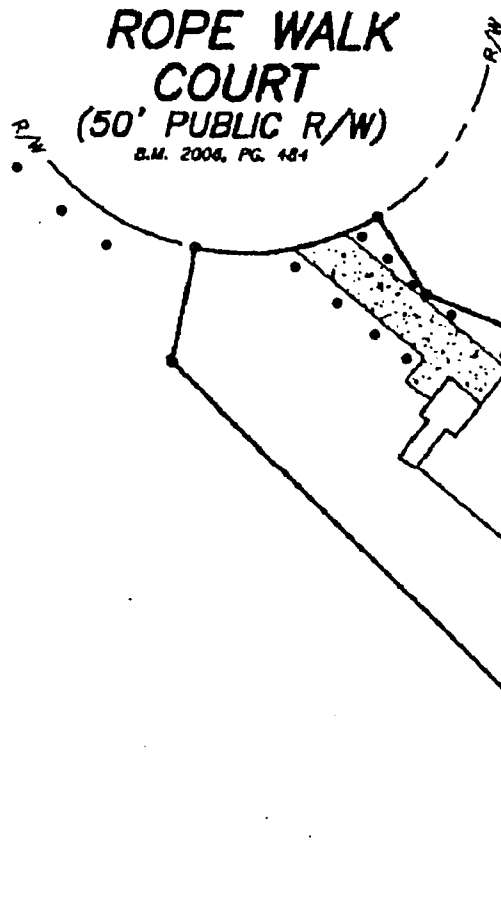


Legend

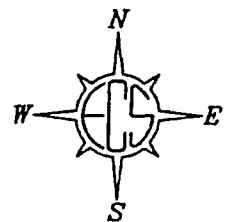
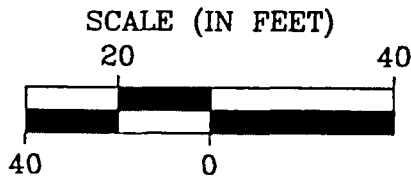
AOC = Area of Concern
 IB = Isopropylbenzene Concentration (ppm)



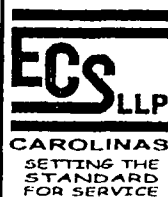
Remediation Goal Exceedances for Isopropylbenzene		Phase I Remedial Investigation		ENGINEER SMB	SCALE ~1"=40'
		Knichel Residence		DRAFTSMAN DAH	PROJECT NO. 06:15416
		223 Ropewalk Court		REVISIONS	SHEET Figure 7
		Morrisville, Wake County, NC			DATE 10-12-07



Legend
 AOC = Area of Concern
 B = 2-Butanone (MEK) Concentration (ppm)

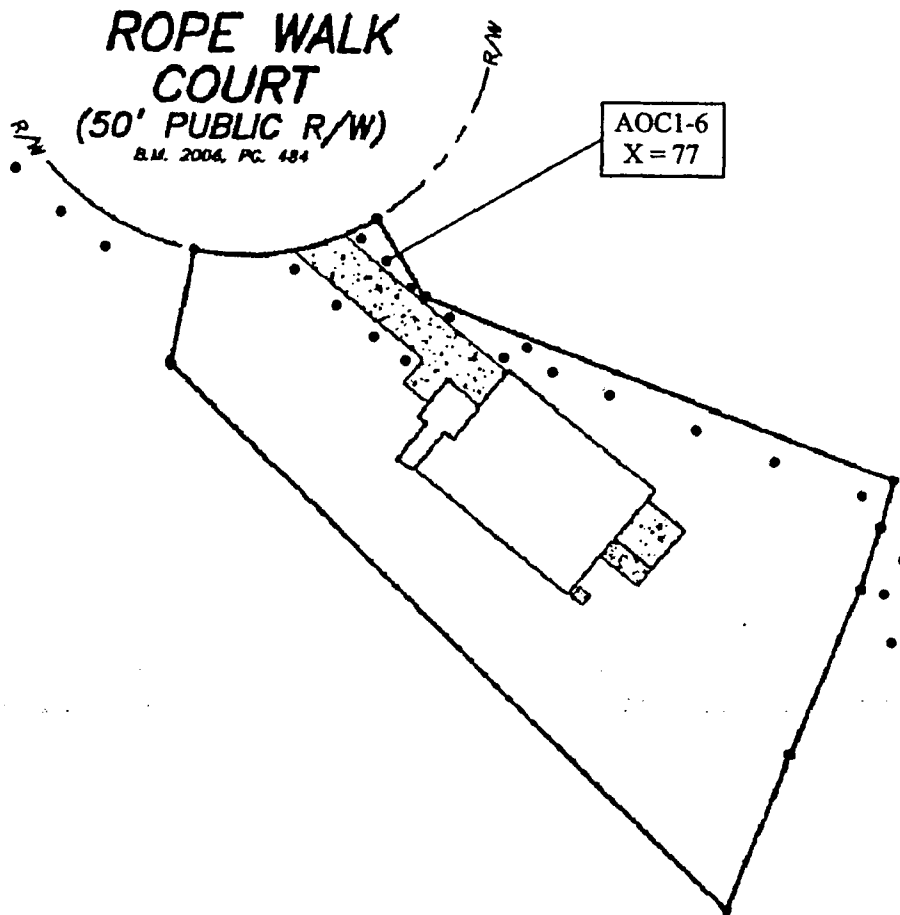


Remediation Goal
 Exceedances for
 2-Butanone (MEK)

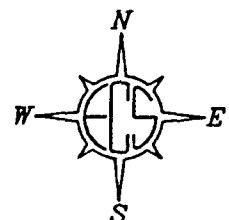
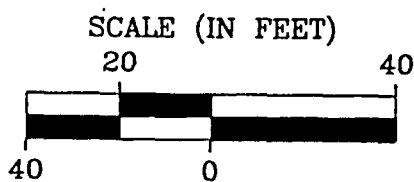


Phase I Remedial Investigation
 Knichel Residence
 223 Ropewalk Court
 Morrisville, Wake County, NC

ENGINEER SMB	SCALE ~1"=40'
DRAFTSMAN DAH	PROJECT NO. 06:15416
REVISIONS	SHEET Figure 8
	DATE 10-12-07



Legend
AOC = Area of Concern
X = Xylene Concentration (ppm)

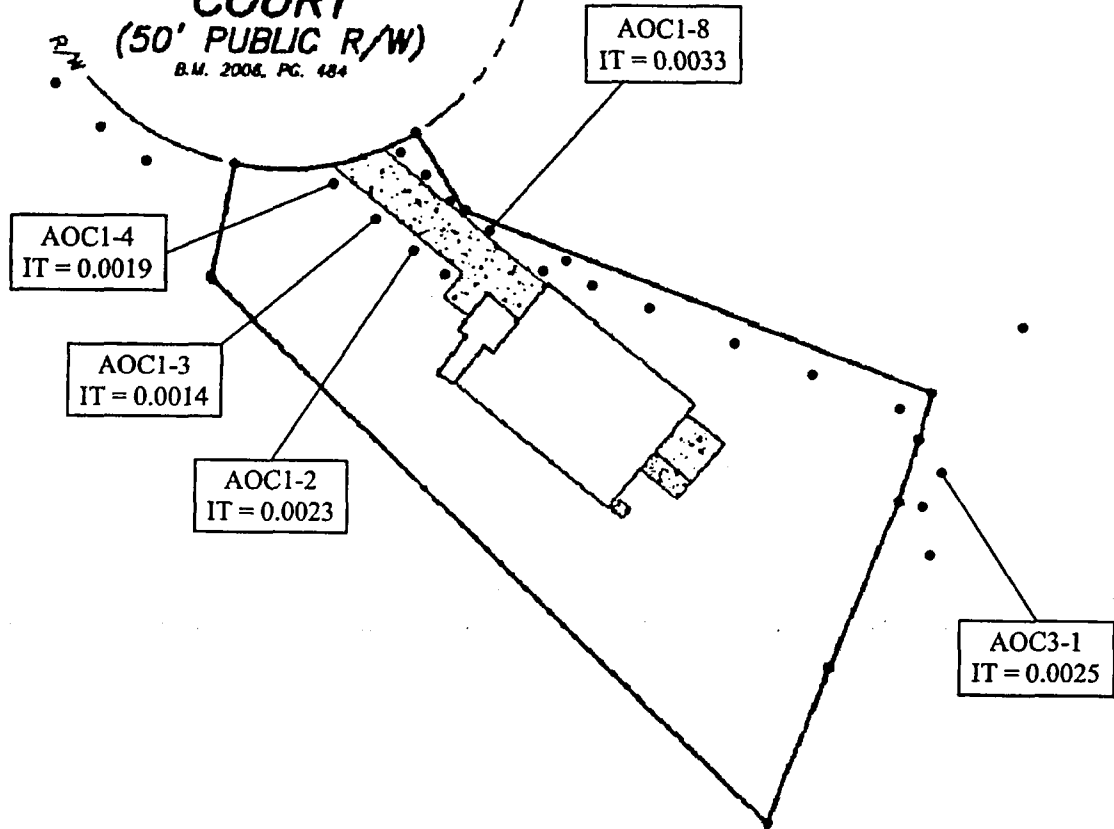


Remediation Goal Exceedances for Xylene		Phase I Remedial Investigation Knichel Residence 223 Ropewalk Court Morrisville, Wake County, NC	ENGINEER SMB	SCALE ~1"=40'
			DRAFTSMAN DAH	PROJECT NO. 06:15416
			REVISIONS	SHEET Figure 5
				DATE 10-12-07

ROPE WALK COURT

(50' PUBLIC R/W)

B.M. 2006, PG. 484

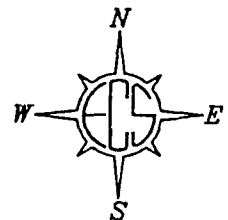
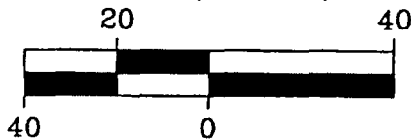


Legend

AOC = Area of Concern

IT = p-IsopropylToluene Concentration (ppm)

SCALE (IN FEET)

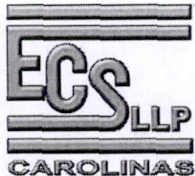


Remediation Goal
Exceedances for
p-Isopropyltoluene



Phase I Remedial Investigation
Knichel Residence
223 Ropewalk Court
Morrisville, Wake County, NC

ENGINEER SMB	SCALE ~1"=40'
DRAFTSMAN DAH	PROJECT NO. 06:15416
REVISIONS	SHEET Figure 6
	DATE 10-12-07



ECS CAROLINAS, LLP

Geotechnical • Construction Materials • Environmental

Mr. Darryl Rennells
KB Home, Raleigh-Durham Inc.
2610 Wycliff Road
Suite 102
Raleigh, North Carolina 27607

October 15, 2007

Mr. Travis Cope
Senior Regional Counsel
KB Home
10990 Wilshire Blvd (7th Floor)
Los Angeles, CA 90024

RE: Phase I Remedial Investigation Report
Knichel Residence
223 Ropewalk Court
Morrisville, Wake County, North Carolina
ECS Project Number 06.15416

Dear Mr. Rennells and Mr. Cope:

As authorized by your acceptance of our Proposal 06.11478 dated September 28, 2007, ECS Carolinas, LLP (ECS) has completed the Phase I Remedial Investigation Report for the above referenced site. Included in this report is a description of the field activities, the results obtained, and our conclusions and recommendations.

We appreciate the opportunity to provide our services to you. If there are questions regarding this report, or a need for further information, please contact us at (919) 861-9910.

Respectfully submitted,

ECS CAROLINAS, LLP

Ryan Conchilla
Senior Environmental Scientist


Mark Brown, L.G., P.G., RSM
Principal Geologist
Environmental Services Department Manager
NC Licensed Geologist #1711

**PHASE I REMEDIAL INVESTIGATION REPORT
223 ROPEWALK COURT (KNICHEL RESIDENCE)
MORRISVILLE, NORTH CAROLINA**

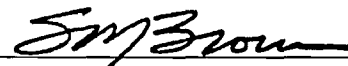
ECS PROJECT 06.15416

**PREPARED FOR
KB HOME, RALEIGH-DURHAM INC.
2610 WYCLIFF ROAD
SUITE 102
RALEIGH, NORTH CAROLINA, 27607**

OCTOBER 15, 2007



Ryan Conchilla
Senior Environmental Scientist



Mark Brown, L.G., P.G., RSM
Principal Geologist
NC Licensed Geologist #1711

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6.0	CONCLUSIONS AND RECOMMENDATIONS	7
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	Figure 2A – 1984 USGS Topographic Map
	Figure 2B – Site Location Map
	Figure 2C – Wake County Soil Survey
	Figure 2D – Site Survey Plat (Provided by KB Home)
	Figure 3 - Sample Locations with Areas of Concern (AOC)
	Figure 4 - Remediation Goal Exceedences
	Figure 5- Remediation Goal for xylene
	Figure 6- Remediation Goal for p-isopropyltoluene
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	Figure 9- Remediation Goal for n-propylbenzene

TABLES	Table 1 – Summary of Field PID Readings
	Table 2 – Summary of Soil Analytical Results
	Table 3 – Summary of Surface Water Analytical Results

APPENDIX A- Laboratory Data Sheets and Chain of Custody Record

APPENDIX B- Indoor Air Quality Analytical Results, conclusions and recommendations.

1.0 BACKGROUND INFORMATION

The site is the Knichel residence located at 223 Ropewalk Court, Morrisville, North Carolina (Figure 1 and Figure 2). A surveyed plat was provided by Mr. Darrel Rennells, representative of KB Home, Raleigh-Durham Inc (KB Home).

On September 24, 2007, representatives of KB Home asked that ECS send environmental personnel to a KB Home residential construction site (residence) to observe suspect conditions reported by the homeowner. Later that day, ECS personnel visited the site with Mr. Darryl Rennells of KB Home. During the site visit, ECS personnel observed stained grass and soils in the front and back yards of the residence. These areas were located on both sides of the driveway in the front yard, a grass swell located on the northern and eastern sides of the residence and portions of the backyard.

It is ECS' understanding that the resident, Ms. Stephanie Knichel, noted strong suspect odors on September 18th and 19th, 2007 after the concrete driveway was sealed by KB Home contractors. In response, KB Home contracted Yard Nique of Cary, NC, who reportedly excavated near-surface soils beside the driveway and hauled them off-site. After contacting the regional office of the North Carolina Department of Natural Resources, Division of Waste Management, Superfund Section (Section), Mr. Keith Snively of the Section's Inactive Hazardous Sites Branch (IHSB) visited the site on September 21, 2007. ECS personnel spoke with Mr. Snively on September 24, 2007 and Mr. Snively requested that KB Home submit a Phase I Remedial Investigation Work Plan in accordance with the IHSB *Guidelines for Assessment and Cleanup (Guidelines)*.

The site is zoned as residential by the Town of Morrisville and part of the Twin Lakes, KB Home Subdivision. Land use in the vicinity of the site consists primarily of residential facilities. There is a Town of Morrisville greenway easement located adjacent to the southern property boundary and a 50-foot Neuse River buffer located along the eastern property boundary that may serve as a natural area attractive to terrestrial ecological receptors. During our site reconnaissance there was no evidence of dead domestic animals or wildlife in the immediate vicinity of the site.

2.0 SITE GEOLOGY AND HYDROGEOLOGY

The subject property is located within the Inner Piedmont Belt of the Piedmont Physiographic Province. The soil encountered in this area is the residual product of in-place chemical weathering of rock presently underlying the site. The overburden beneath the site can be greater than 40 feet deep. According to the USDA Soil Conservation Service, *Soils of Wake County*, the soil beneath the site can be described as the Creedmoor sandy loam consisting of sandy, clay loam which infiltration is fair and permeability is slow. According to the *Geologic Map of North Carolina* dated 1985, the bedrock beneath the site consists of a biotitic, quartz, feldspar and in some places, muscovite or hornblende, locally garnetiferous and interlayered with calc-silicate rock.

In general, shallow unconfined groundwater movement within the overlying soil is controlled largely by topographic gradients. However, as the groundwater percolates downward to the bedrock, it becomes controlled by the orientation of the rock fracture systems. Thus, the direction of groundwater movement may not be consistent with the reflecting topography. Recharge occurs primarily by infiltration along higher elevations and typically discharges into streams or other surface water bodies. The elevation of the shallow water table is transient and can vary greatly with seasonal fluctuations in precipitation. Movement in this water table is generally from higher to lower elevations. The site is located at approximately 365 feet above mean sea level (msl). The site gently slopes from the western property boundary to eastern and southern property boundaries of the site. As such, shallow groundwater would be expected to flow generally to the south and southeast beneath the site.

3.0 PREVIOUS AND ONGOING ENVIRONMENTAL INVESTIGATIONS

The following discussion describes the previous investigations at the site. Copies of the previous investigations were submitted to the Branch as required.

3.1 Phase I Environmental Site Assessment

ECS did not complete a Phase I Environmental Site Assessment (ESA) for the site and was not provided with a copy of a Phase I ESA, if one has been previously performed.

3.2 Phase I Work Plan

A *Phase I Work Plan (Work Plan)* was prepared by ECS Carolinas on September 28, 2007 as directed by Mr. Snively. The Work Plan proposed to collect at least three to four samples in each of the five different areas of concern (AOCs) identified on and adjacent to the subject property. The five AOC's were located along the driveway, a small drainage swell located beside the residence, in the backyard, a small drainage feature located behind the residence and along the southern boundary of the Ropewalk Court cul-de-sac. ECS also proposed to collect two surface water samples from the drainage feature located behind the residence. Figure 3 presents the proposed AOCs and sample locations.

3.3 Phase I Remedial Investigation

During implementation of the Phase I Remedial Investigation (RI), ECS collected soil samples at various depths from twenty-one locations labeled (AOC 1-1 thru AOC 1-10, AOC 2-1 thru AOC 2-5, AOC 3-1 thru AOC 3-3 and AOC 5-1 thru AOC 5-3). ECS personnel also collected surface water samples from two areas in a drainage feature located behind the residence labeled AOC 4-L and AOC 4-R. The soil samples were collected to assess potential presence of volatile organic compounds (VOCs) onsite.

In addition to the samples collected as part of the RI detailed above, ECS personnel also collected soil samples (as directed by Ms. Rosemary Skalka, representative of KB Home) from behind the residence of 203 Ropewalk Court. This sampling location is labeled as AOC 6-1 and AOC 6-2. The analytical results for these locations are included in Table 2. Samples collected and analyzed from this location were below quantitative limits for VOCs. However, the AOC 6 sampling location is not depicted on the figures included in this report because it was not part of the Phase I RI Work Plan submitted and directed by the IHSB but was completed as requested by KB Home.

AOC 7-1 is also included in the laboratory analysis of Table 2. AOC 7-1 was set up as a blind duplicate for sampling location AOC 3-3. The analytical results for AOC 7-1 were below quantitative limits for their respective target analytes.

4.0 FIELD ACTIVITIES

Prior to mobilizing to the site, ECS prepared a Health and Safety Plan for the activities to be completed at the site. The Health and Safety plan is located in Appendix D of the RI Work Plan. Field activities were conducted in general accordance with the RI Work Plan dated October 3, 2007.

4.1 Soil Sampling

On October 4, 2007, ECS personnel collected soil samples from randomly-selected locations in AOC 1, AOC 2, AOC 3 and AOC 5 (Figure 4) using a stainless-steel hand auger (auger). Soil samples were collected from just beneath the ground surface to a maximum depth of 2.0 feet below the ground surface (bgs) in some locations. Each soil sample was collected by auguring bgs to a known depth using a tape measure and then placing a portion of the sample into a re-sealable plastic bag (aliquot). The auger and stainless-steel bucket were decontaminated by washing in a solution of Alconox detergent and potable water, followed by a rinse with de-ionized water prior to initiating the first boring, between each new boring location and each individual sample depth. Equipment blanks and blind duplicate samples were collected in the field. Trip blank and laboratory quality assurance information is included with the laboratory data sheets in the Appendix.

A representative sample of sample depth and corresponding location was screened for relative levels of organic vapors using a Foxboro Model 1000B toxic vapor analyzer (TVA). The TVA operates using a flame-ionization detector (FID) and a photo-ionization detector (PID). Field screening measurements ranged from a low of 0.65 parts per million (ppm) at sample location AOC 2-5 at 1-foot bgs to a high of 2,100 ppm at sample location AOC 1-2 surface. Soil samples selections were based on TVA readings and/or visual and olfactory observations. A summary of these screening level results are provided in Table 1.

4.2 Surface Water Sampling

During the RI, ECS personnel also collected surface water samples from two selected locations in the drainage feature located behind the residence (AOC 4). The sampling areas were located upstream and downstream of the suspected area which surface run-off from the subject property may have entered the drainage feature. Each surface water sample was collected in clean 1-liter amber jar and then transferred to a smaller 40-milliliter (ml) vial preserved with 5 ml of methanol. This sampling method was used to minimize loss of the preservative. Equipment blanks and duplicate samples were collected in the field. Trip blank and laboratory quality assurance information is included with the laboratory data sheets in the Appendix.

The samples collected were placed in laboratory-prepared containers using a new pair of disposable nitrile gloves for each sample. Each container was labeled and placed in a cooler containing ice to maintain the samples at approximately 4° Celsius. The samples were delivered to Environmental Science Corp Laboratories, Inc. (ESC) in Mt. Juliet, Tennessee for chemical analysis. A Chain of Custody Record is included in the Appendix.

5.0 LABORATORY ANALYSIS

5.1 Soil Analytical Results

Soil samples collected from AOC 1, AOC 2, AOC 3 and AOC 5 were analyzed by Environmental Science Corp. (ESC) for volatile organic compounds (VOCs) by EPA Method 8260-B.

Laboratory analysis of soil samples from AOC 1 detected levels of xylene, p-isopropyltoluene, isopropylbenzene and n-propylbenzene slightly above the Inactive Hazardous Sites Branch (IHSB) Remediation Goals (RG). A summary of the soil analytical results is presented in Table 1. The laboratory data sheets and Chain of Custody Record are included in the Appendix.

Laboratory analysis of soil samples from AOC 2 detected levels of isopropylbenzene at 0.0023 ppm. The RG has not been established for this analyte and therefore detection is considered an exceedance.

Laboratory analysis of soil samples from AOC 3 exhibited levels of p-isopropyltoluene at 0.0025 ppm. Levels of 2-butanone (MEK) were detected at AOC 3-2 and 3-3 at 0.0012 ppm and 0.031 ppm, respectively. The RG have not been established for these analytes and therefore their detections are considered an exceedance.

Target analytes in soil samples collected from AOC 5 were all detected below quantitation limits (BQL). A summary of these analytical results are provided in Table 2.

5.2 Surface Water Analytical Results

Surface water samples collected from AOC 4-L and AOC 4-R were analyzed for VOCs by EPA Method 8260-B. All analytes targeted by the test method were detected below the laboratory quantitation limits.

A summary of the surface water sample analytical results are presented in Table 3. The laboratory data sheets and Chain of Custody Record are included in the Appendix.

6.0 CONCLUSIONS AND RECOMMENDATIONS

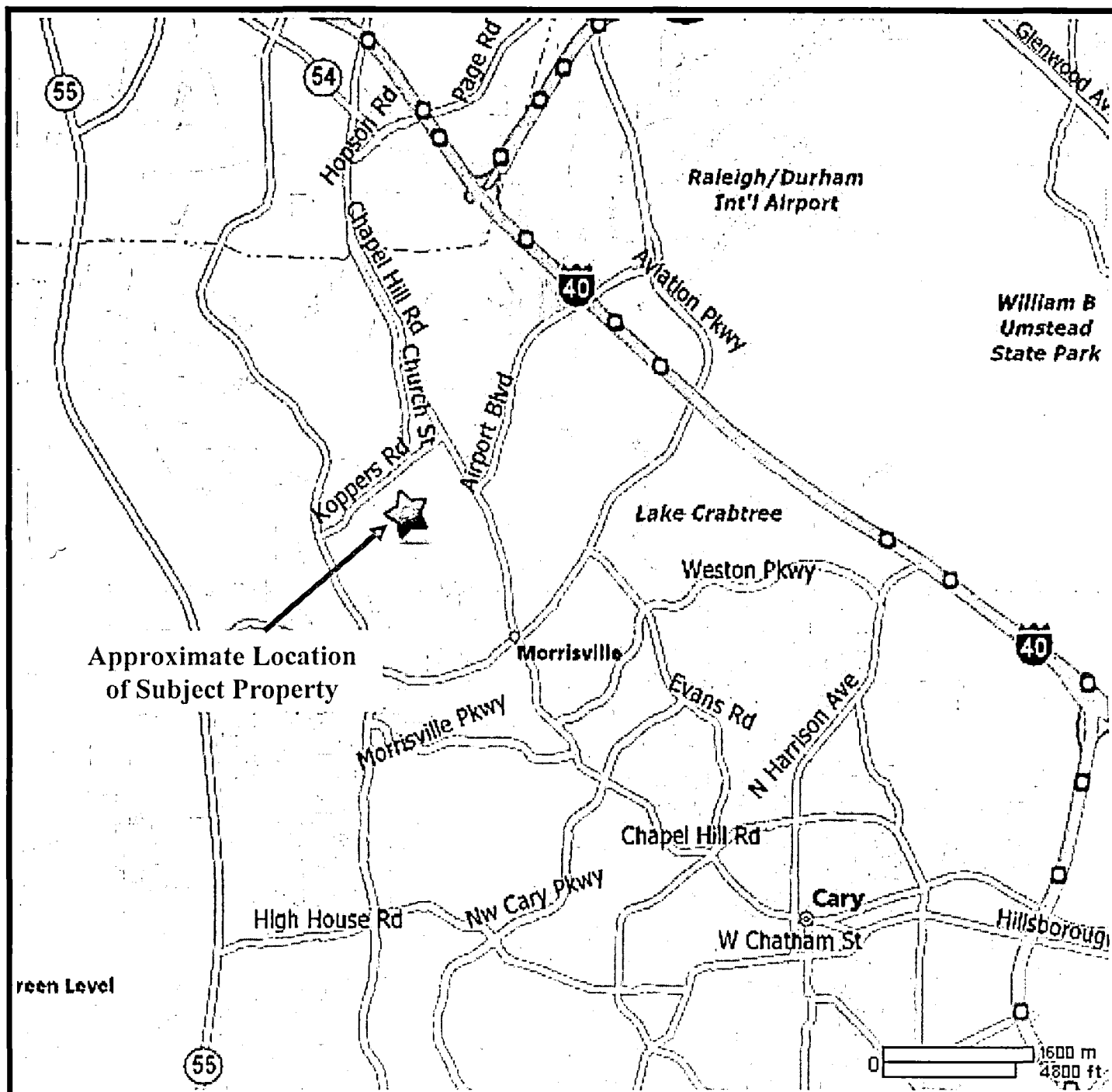
Based on the laboratory analytical results of the soil samples collected during this assessment, ECS concludes the following:

- Laboratory analysis of soil samples collected from AOC 1-2, AOC 1-3, AOC 1-4, AOC 1-5 AOC 1-8, AOC 1-9, AOC 2-1 and AOC 3-1 through AOC 3-3 detected various levels of xylene, p-isopropyltoluene, MEK, isopropylbenzene and n-propylbenzene that were above their respective IHSB RGs. The highest concentration of target analytes detected in the samples analyzed was 77 ppm of xylene, collected at AOC 1-6. The highest concentration of p-isopropyltoluene detected in the samples analyzed was 0.0033 ppm, collected at AOC 1-8. The highest concentration of MEK detected in the samples analyzed was 0.031 ppm, collected at AOC 3-3. The highest concentration of ethylbenzene detected in the samples analyzed was 14 ppm, collected at AOC 1-6. The highest concentration of isopropylbenzene detected in the samples analyzed was 0.0042 ppm, collected at AOC 1-9. The highest concentration of n-propylbenzene detected in the samples analyzed was 0.002 ppm, collected at AOC 1-9.
- As discussed in the RI Work Plan dated September 28, 2007, ECS personnel conducted a field survey (visual) of potential receptors (e.g., water supply wells, monitoring wells, surface water and subsurface utilities) in the vicinity of the site. No water supply wells or monitoring wells were identified on properties located within 1,000 feet of the site. However, a small drainage feature is located adjacent to the east of the subject property.

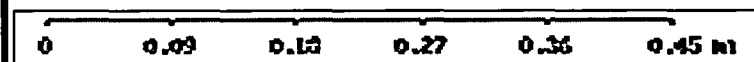
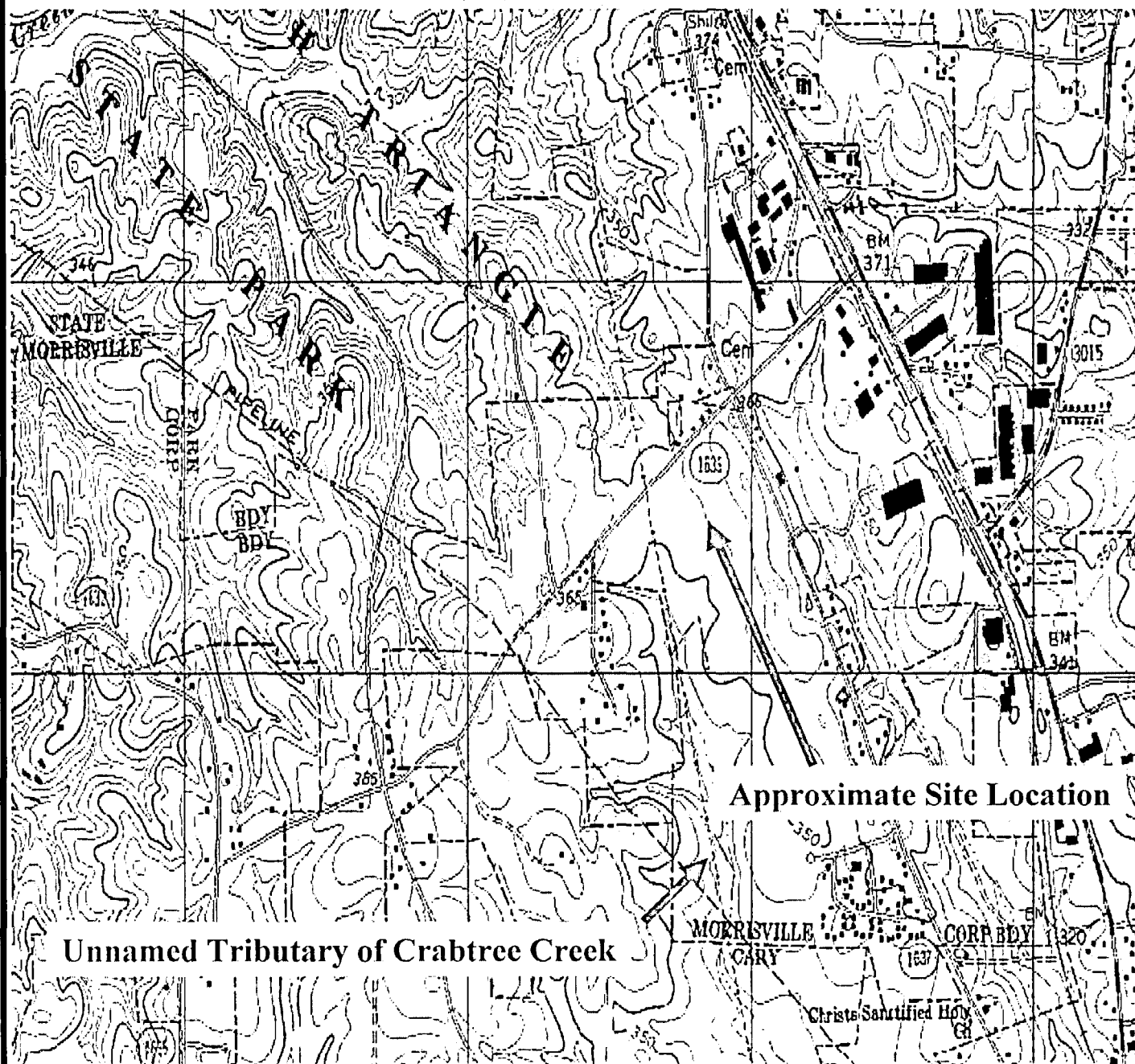
7.0 QUALIFICATIONS OF REPORT


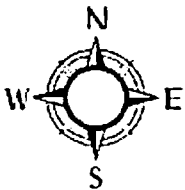
The activities and evaluative approaches used in this assessment are consistent with those normally employed in soil assessment projects of this type. Our evaluation of site conditions has been based on our understanding of the site project information and the data obtained during our field activities. This report was prepared for the express use of KB Home Raleigh-Durham Inc. Use of this report by any other individual or company implies their acceptance of the General Conditions of Service of the original contract.

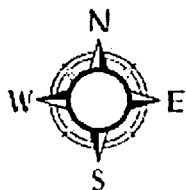
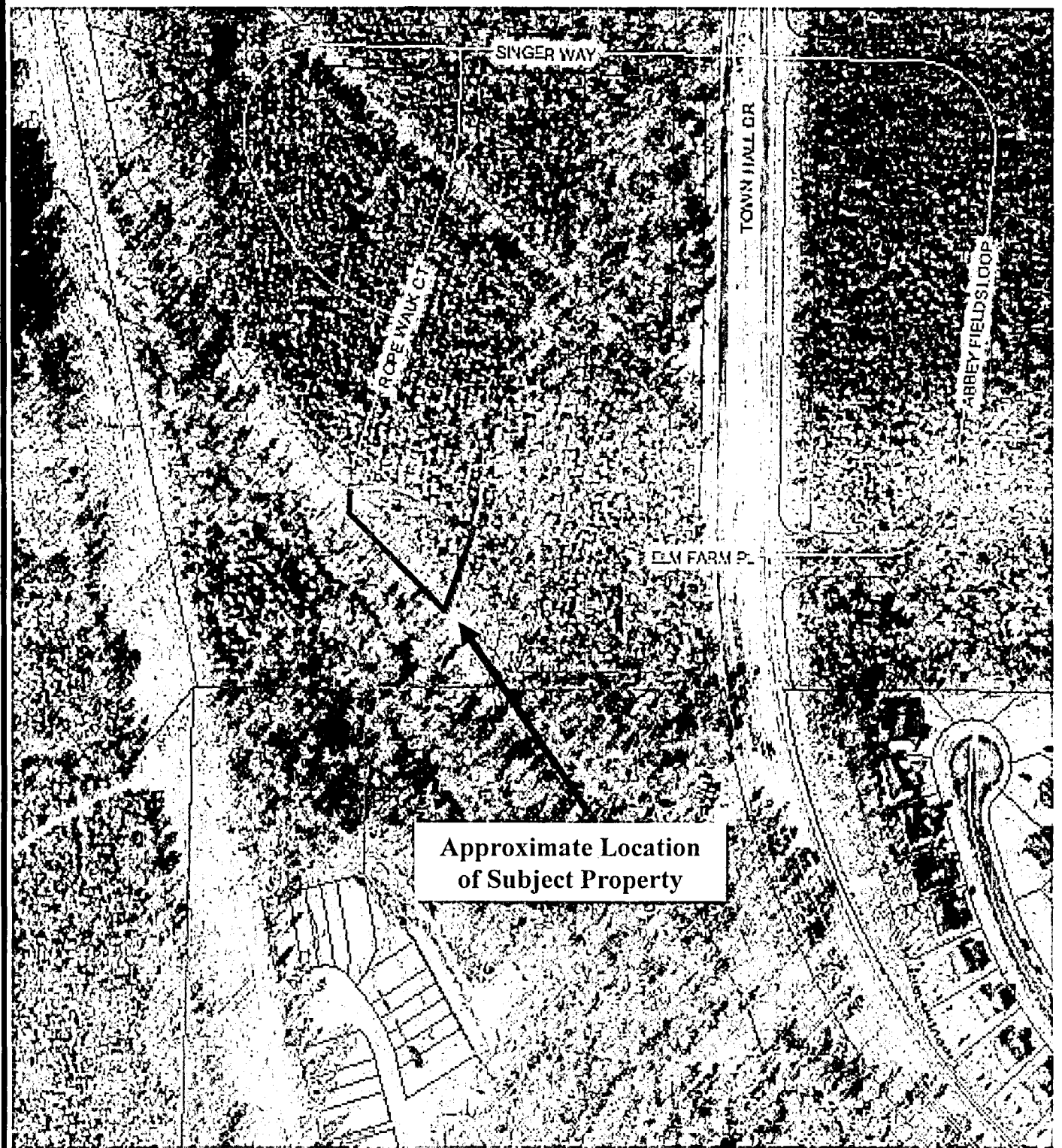
FIGURES



	<p>Scale as Illustrated</p>	<p>Vicinity Map 2007 Google Maps</p>	<p>Figure No. 1</p>
		<p>Phase I Remedial Investigation Knichel Residence 223 Ropewalk Court Morrisville, Wake County, North Carolina</p>	<p>ECS Project # 15416</p>



	 <p>Scale: As Illustrated</p>	<p>Topographic Map 1984 Topozone Cary, North Carolina Quadrangle</p> <p>Phase I Remedial Investigation Knichel Residence 223 Ropewalk Court Morrisville, Wake County, North Carolina</p>	<p>Figure No. 2A</p> <p>ECS Project # 15416</p>
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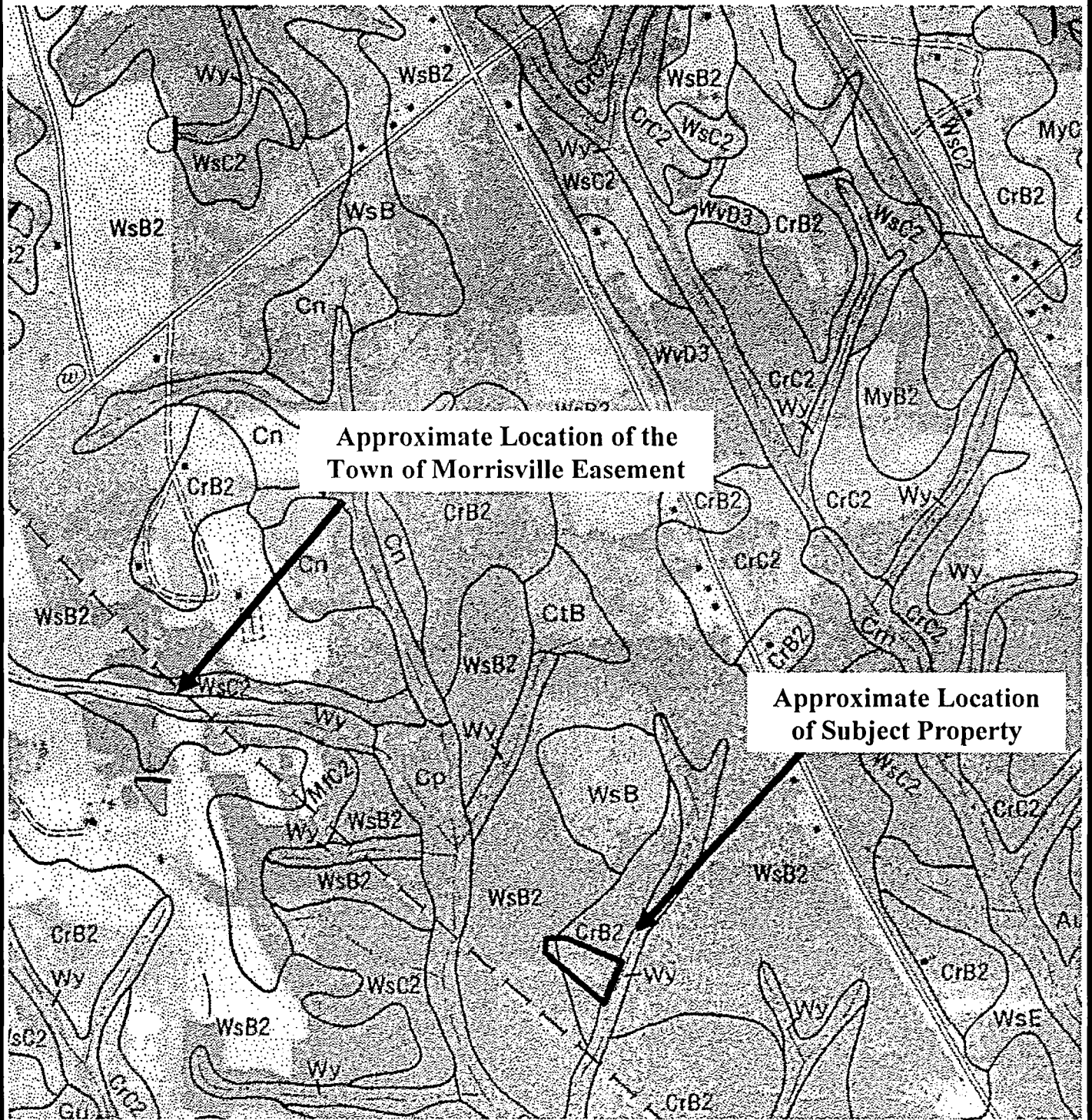
Not to Scale

Site Location Map
2005 Aerial Photo
Wake County Online GIS

Phase I Remedial Investigation
Knichel Residence
223 Ropewalk Court
Morrisville, Wake County, North Carolina

Figure No.
2B

ECS Project #
15416

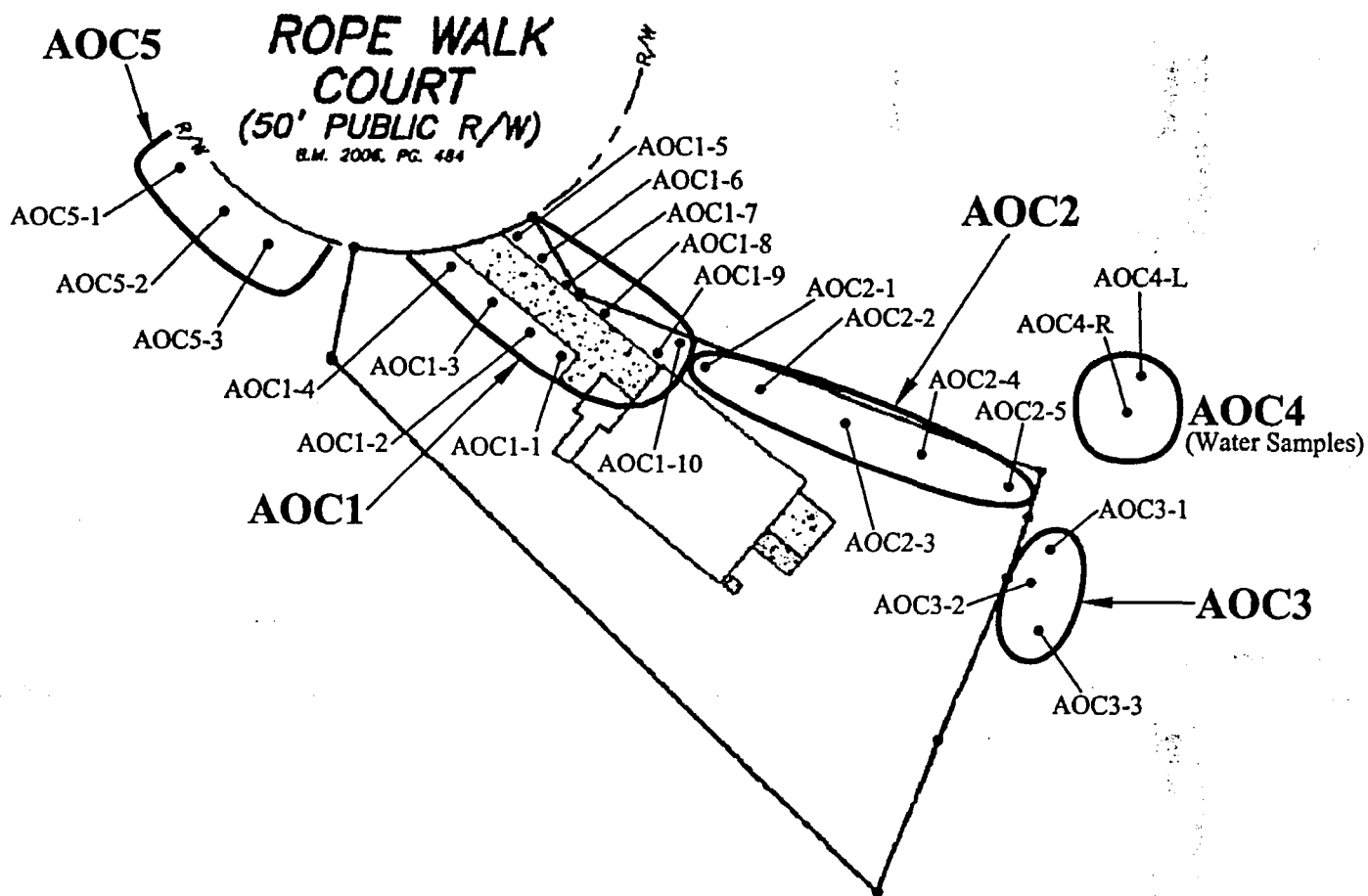


Wake County Soil Survey

Figure No.
2C

Phase I Remedial Investigation
Knichel Residence
223 Ropewalk Court
Morrisville, Wake County, North Carolina

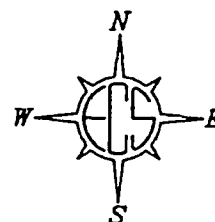
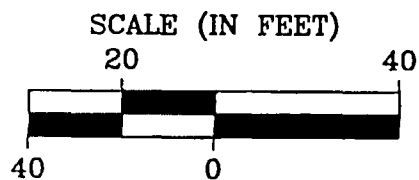
ECS Project #
15416



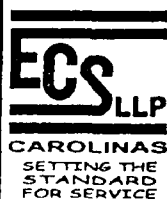
Legend

AOC = Area of Concern

AOC1-1 = Sample Location



Sample
Locations



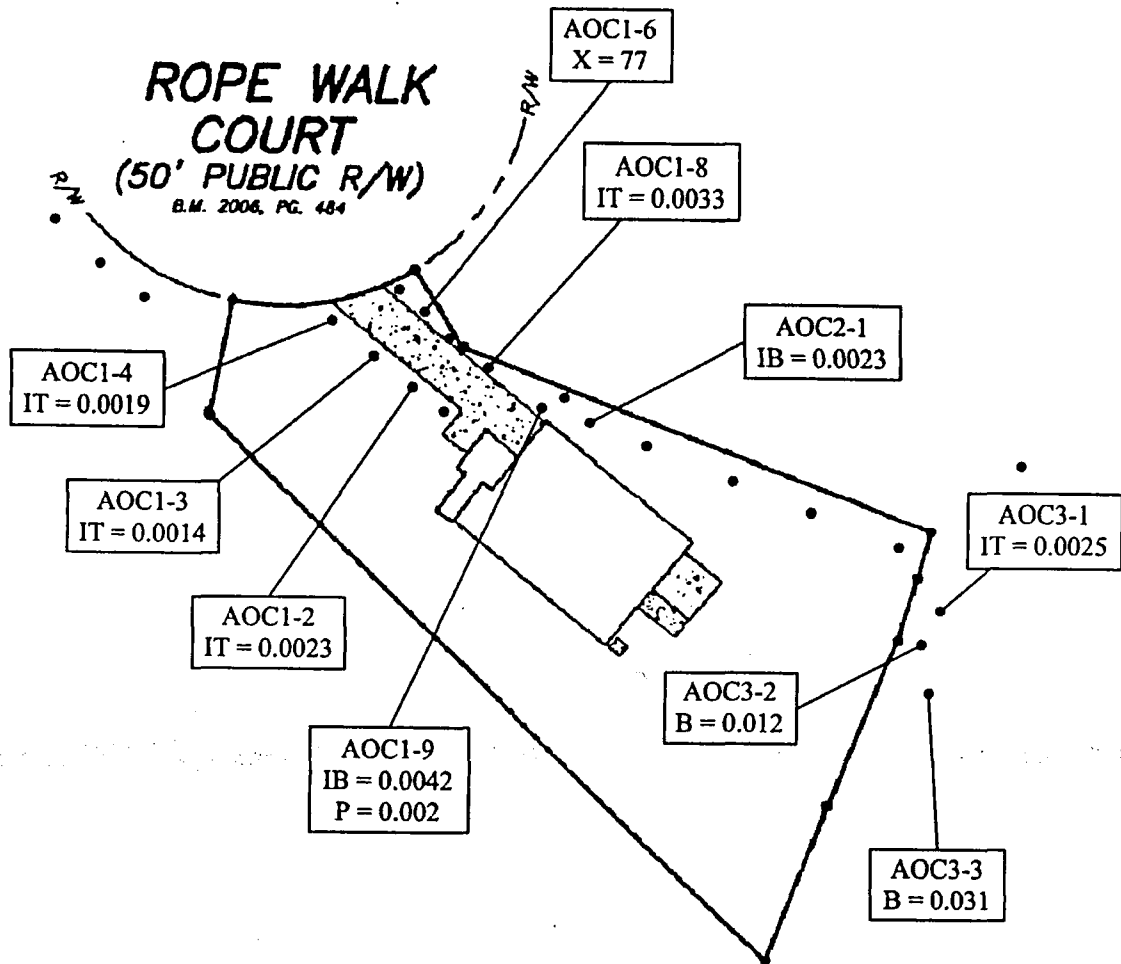
Phase I Remedial Investigation
Knichel Residence
223 Ropewalk Court
Morrisville, Wake County, NC

ENGINEER SMB	SCALE ~1"=40'
DRAFTSMAN DAH	PROJECT NO. 06:15416
REVISIONS	SHEET Figure 3
	DATE 10-12-07

ROPE WALK COURT

(50' PUBLIC R/W)

B.M. 2006, PG. 484



Legend

AOC = Area of Concern

X = Xylene Concentration (ppm)

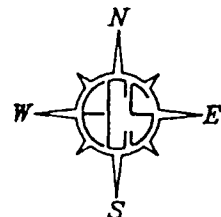
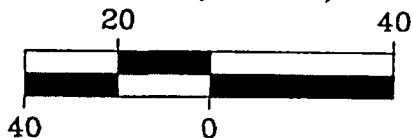
IT = p-IsopropylToluene Concentration (ppm)

IB = Isopropylbenzene Concentration (ppm)

B = 2-Butanone (MEK) Concentration (ppm)

P = n-Propylbenzene Concentration (ppm)

SCALE (IN FEET)

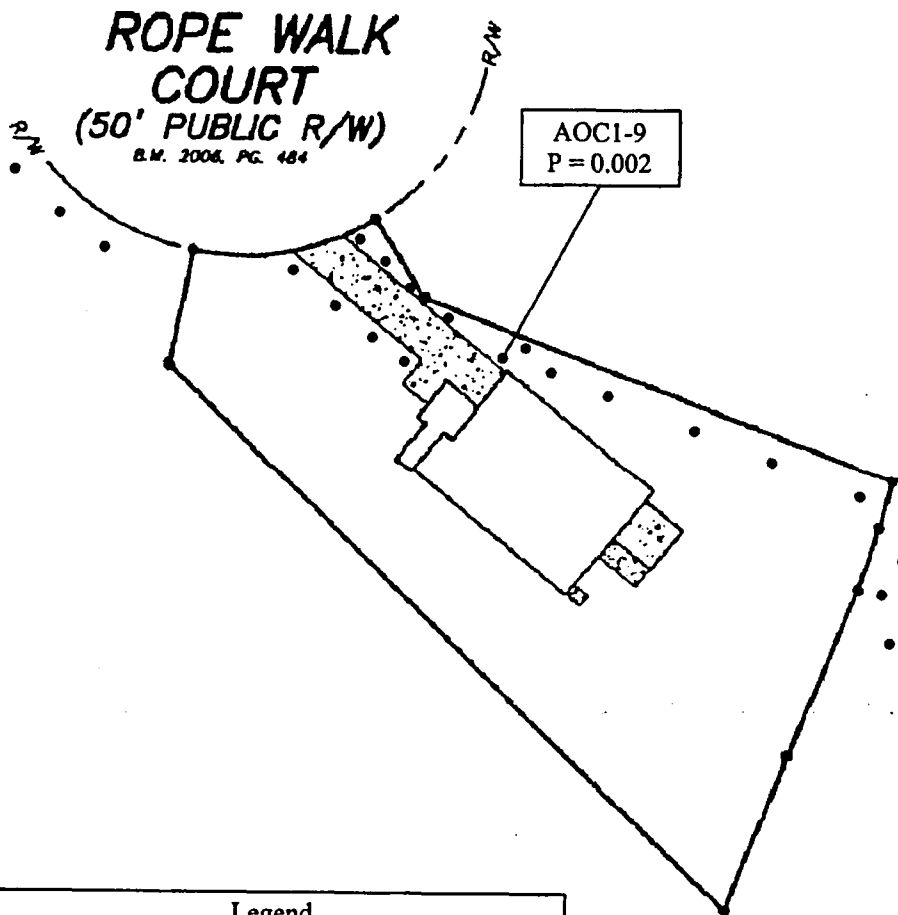


Remediation
Goal Exceedances

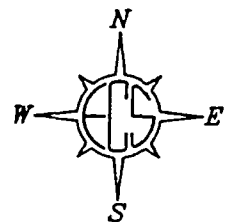
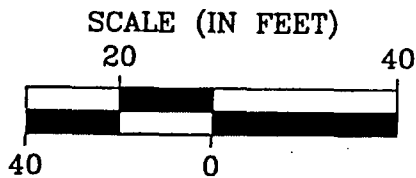


Phase I Remedial Investigation
Knichel Residence
223 Ropewalk Court
Morrisville, Wake County, NC

ENGINEER SMB	SCALE ~1"=40'
DRAFTSMAN DAH	PROJECT NO. 06:15416
REVISIONS	SHEET Figure 4
	DATE 10-12-07



Legend
AOC = Area of Concern
P = n-Propylbenzene Concentration (ppm)



Remediation Goal
Exceedances for
n-Propylbenzene



Phase I Remedial Investigation
Knichel Residence
223 Ropewalk Court
Morrisville, Wake County, NC

ENGINEER SMB	SCALE ~1"=40'
DRAFTSMAN DAH	PROJECT NO. 06:15416
REVISIONS	SHEET Figure 9
	DATE 10-12-07

TABLES

TABLE 1
SUMMARY OF FIELD PID READINGS

Date: October 4, 2007

Project Name: Knichel Residence

ECS Job Number: 06.15416

Sample ID	Sample Depth (ft)	PID (ppm)*	PID Bkgd (ppm)
AOC1-1	Surface	1370	73
	0.5	102	19
	1	1151	63
	1.5	670	10
AOC1-2	Surface	2100	7.32
	0.5	454	17.5
	1	360	16
	1.5	204	16.3
AOC1-3	Surface	258	5.9
	0.5	161	12.7
	1	127	7.5
	1.5	83	6.5
AOC1-4	Surface	62	5.6
	0.5	45.5	5.5
	1	28	3.96
	1.5	33	0.5
AOC1-5	Surface	21	1.88
	0.5	17.9	2.3
	1	18.5	1.34
AOC1-6	Surface	45	0.74
	0.5	103	3.2
	1	28	1.2
AOC1-7	Surface	10.5	0.49
	0.5	5.8	0.46
	1	3.6	0.4
	1.5	1.5	0.34
AOC1-8	Surface	5.7	0.52
	0.5	3.7	0.52
	1	2.65	0.42
	1.5	2.4	0.47
AOC1-9	Surface	19.26	0.98
	0.5	43	1.48
	1	19.7	1.3
	1.5	23.7	1.5
	2	5.75	2

TABLE 1
SUMMARY OF FIELD PID READINGS

Sample ID	Sample Depth (ft)	PID (ppm)*	PID Bkgd (ppm)
AOC1-10	Surface	6.7	0.32
	0.5	145	0.85
	1	0.75	0.35
AOC2-1	Surface	44	0.75
	0.5	32	1.6
	1	16.1	1.2
AOC2-2	Surface	10.8	0.67
	0.5	9.2	0.6
	1	6.37	0.6
AOC2-3	Surface	98.1	0.78
	0.5	144	0.85
	1	39.4	0.76
AOC2-4	Surface	101	0.59
	0.5	15.7	0.85
	1	3.75	0.46
AOC2-5	Surface	22.5	0.35
	0.5	3.5	0.54
	1	0.65	0.25
AOC3-1	Surface	8.2	0.3
	0.5	12.04	0.3
AOC3-2	Surface	1.44	0.5
	0.5	2.29	-4.05
AOC3-3	Surface	2.1	0.35
	0.5	4.73	0.5
AOC5-1	Surface	5.14	0.37
	0.5	2.65	0.52
AOC5-2	Surface	2.74	0.35
	0.5	3.06	0.38
AOC5-3	Surface	3.54	0.55
	0.5	1.84	0.33
AOC6-1	Surface	1.87	0.24
	0.5	0.97	0.33
AOC6-2	Surface	3.23	0.23
	0.5	0.81	0.33
AOC7-1	Surface	2.1	0.35
	0.5	4.73	0.5

*Volatile Organic Compounds (VOC) screened in the field using a Foxboro Model 1000B toxic vapor analyzer (TVA). VOC concentrations listed above are not laboratory confirmed and should only be used as a guide and not as the true concentrations of VOCs in the soils collected from the represented sample.

**TABLE 2
SUMMARY OF SOIL SAMPLING RESULTS**

Date: October 5, 2007
Project Name: Knichel Residence
ECS Job Number: 06.15416

Sample ID	Analytical Method Contaminant of Concern		8260B	8260B	8260B	8260B	8260B	8260B	8260B
	Date Collected	Approximate Sample Depth (ft)	Acetone	Ethylbenzene	Isopropylbenzene	p-Isopropyltoluene	2-Butanone (Methyl Ethyl Ketone)	n-Propylbenzene	Xylene
AOC1-1	10/3/2007	1	BQL	BQL	BQL	BQL	BQL	BQL	BQL
AOC1-2	10/3/2007	0.5	0.12	BQL	BQL	0.0023	BQL	BQL	BQL
AOC1-3	10/3/2007	0.5	0.13	BQL	BQL	0.0014	BQL	BQL	BQL
AOC1-4	10/3/2007	0.5	0.98	BQL	BQL	0.0019	BQL	BQL	BQL
AOC1-5	10/3/2007	0.5	BQL	BQL	BQL	BQL	BQL	BQL	BQL
AOC1-6	10/3/2007	0.5	BQL	14	BQL	BQL	BQL	BQL	77
AOC1-7	10/3/2007	0.5	BQL	BQL	BQL	BQL	BQL	BQL	BQL
AOC1-8	10/3/2007	0.5	0.12	0.018	BQL	0.0033	BQL	BQL	0.1
AOC1-9	10/3/2007	0.5	0.13	0.62	0.0042	BQL	BQL	0.002	3.3
AOC1-10	10/3/2007	Surface	0.19	0.0022	BQL	BQL	BQL	BQL	0.017
AOC2-1	10/3/2007	0.5	BQL	0.97	0.0023	BQL	BQL	BQL	0.64
AOC2-2	10/3/2007	0.5	BQL	0.0014	BQL	BQL	BQL	BQL	0.026
AOC2-3	10/3/2007	0.5	BQL	BQL	BQL	BQL	BQL	BQL	0.0071
AOC2-4	10/3/2007	Surface	BQL	0.52	BQL	BQL	BQL	BQL	5.5
AOC2-5	10/3/2007	0.5	BQL	BQL	BQL	BQL	BQL	BQL	BQL
AOC3-1	10/3/2007	0.5	BQL	BQL	BQL	0.0025	BQL	BQL	BQL
AOC3-2	10/3/2007	Surface	0.21	BQL	BQL	BQL	0.012	BQL	BQL
AOC3-3	10/3/2007	0.5	1.2	BQL	BQL	BQL	0.031	BQL	BQL
AOC5-1	10/3/2007	Surface	0.18	BQL	BQL	BQL	BQL	BQL	BQL
AOC5-2	10/3/2007	Surface	0.091	BQL	BQL	BQL	BQL	BQL	BQL
AOC5-3	10/3/2007	Surface	0.88	BQL	BQL	BQL	BQL	BQL	BQL
AOC6-1	10/3/2007	Surface	0.091	BQL	BQL	BQL	BQL	BQL	BQL
AOC6-2	10/3/2007	Surface	0.1	BQL	BQL	BQL	BQL	BQL	BQL
AOC7-1	10/3/2007	0.5	0.37	BQL	BQL	BQL	BQL	BQL	BQL
Inactive Hazardous Sites Branch Soil Remediation Goals (RGs)			2800	380	NE	NE	NE	NE	54
NCAC 2L Groundwater Standards (converted to mg/L) ¹			0.7	0.55	0.07	NE	4.2	0.07	0.53
Groundwater Standards (times 20) ²			14	11	1.4	NE	84	1.4	10.6

Bold indicates results above the Soil Remediation Goals

Gray shaded box indicates results above Groundwater Standards (times 20)

ppm = parts per million

BQL = Below Quantitation Limit

NA = Not Analyzed

NE = Not Established, therefore a detection is considered an exceedance

Sample results and regulatory limits are presented in parts per million (ppm)

¹ The Groundwater Standards promulgated in 15A NCAC 2L are typically presented in micrograms per liter (ug/L). The Groundwater Standards have been converted into milligrams/liter (mg/L) for comparison.

² As a comparison against Exception 2 listed in Section 4.1.1.2 of the IHSP Guidelines for Assessment and Cleanup, August 2007, the Groundwater Standards values have been converted to mg/L, and multiplied 20 times.

TABLE 3
SUMMARY OF SURFACE WATER ANALYTICAL RESULTS

Date: October 5, 2007
Project Name: Kniche! Residence
ECS Job Number: 06.15416

Analytical Method			8260B
Sample ID	Contaminate of Concern		All Parameters
	Date Collected	Depth to Water (ft)	
AOC4-R1	10/3/2007	Surface	BQL
AOC4-R2	10/3/2007	Surface	BQL
AOC4-L1	10/3/2007	Surface	BQL
AOC4-L2	10/3/2007	Surface	BQL
NCAC 2L Standard (ppb)			-
NCDENR GCL (ppb)			-

Notes:

Sample results are presented in parts per billion (ppb)

BQL = Below Quantitation Limit

NCAC 2L = North Carolina Groundwater Standards promulgated under 15A NCAC 2L.0202

NCDENR GCL = North Carolina Department of Environment and Natural Resources Gross Contamination Level

APPENDIX A



ENVIRONMENTAL
SCIENCE CORP.

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave

Raleigh, NC 27617-7505

Report Summary

Monday October 08, 2007

Report Number: L313746

Samples Received: 10/04/07

Client Project:

Description: Knichel Residence

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Travis Johnson
Travis Johnson, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 09227, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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30 Samples Reported: 10/08/07 18:16 Printed: 10/08/07 18:17

Page 1 of 85



ENVIRONMENTAL SCIENCE CORP.

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Est. 1970

REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence
Sample ID : AOC 1-1 1 FT
Collected By :
Collection Date : 10/03/07 09:57

ESC Sample # : L313746-01

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	84.0	0.100	%	2540G	10/05/07	1
Volatile Organics						
Acetone	BDL	0.060	mg/kg	8260B	10/08/07	1
Acrylonitrile	BDL	0.012	mg/kg	8260B	10/08/07	1
Benzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromodichloromethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromoform	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromomethane	BDL	0.0060	mg/kg	8260B	10/08/07	1
n-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
sec-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
tert-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Carbon tetrachloride	BDL	0.0012	mg/kg	8260B	10/08/07	1
Chlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Chlorodibromomethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Chloroethane	BDL	0.0060	mg/kg	8260B	10/08/07	1
2-Chloroethyl vinyl ether	BDL	0.060	mg/kg	8260B	10/08/07	1
Chloroform	BDL	0.0060	mg/kg	8260B	10/08/07	1
Chloromethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
2-Chlorotoluene	BDL	0.0012	mg/kg	8260B	10/08/07	1
4-Chlorotoluene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dibromo-3-Chloropropane	BDL	0.0060	mg/kg	8260B	10/08/07	1
1,2-Dibromoethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Dibromomethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,3-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,4-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Dichlorodifluoromethane	BDL	0.0060	mg/kg	8260B	10/08/07	1
1,1-Dichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
cis-1,2-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
trans-1,2-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,3-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
cis-1,3-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/08/07	1
trans-1,3-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/08/07	1
2,2-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Di-isopropyl ether	BDL	0.0012	mg/kg	8260B	10/08/07	1
Ethylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Hexachlorobutadiene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Isopropylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence

Sample ID : AOC 1-1 1 FT

Collected By :
Collection Date : 10/03/07 09:57

ESC Sample # : L313746-01

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
p-Isopropyltoluene	BDL	0.0012	mg/kg	8260B	10/08/07	1
2-Butanone (MEK)	BDL	0.012	mg/kg	8260B	10/08/07	1
Methylene Chloride	BDL	0.0060	mg/kg	8260B	10/08/07	1
4-Methyl-2-pentanone (MIBK)	BDL	0.012	mg/kg	8260B	10/08/07	1
Methyl tert-butyl ether	BDL	0.0012	mg/kg	8260B	10/08/07	1
Naphthalene	BDL	0.0060	mg/kg	8260B	10/08/07	1
n-Propylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Styrene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,1,2-Tetrachloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,2,2-Tetrachloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Tetrachloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Toluene	BDL	0.0060	mg/kg	8260B	10/08/07	1
1,2,3-Trichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2,4-Trichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,1-Trichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,2-Trichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.0012	mg/kg	8260B	10/08/07	1
Trichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Trichlorofluoromethane	BDL	0.0060	mg/kg	8260B	10/08/07	1
1,2,3-Trichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2,4-Trimethylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,3,5-Trimethylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Vinyl chloride	BDL	0.0012	mg/kg	8260B	10/08/07	1
Xylenes, Total	BDL	0.0036	mg/kg	8260B	10/08/07	1
Surrogate Recovery						
Toluene-d8	115.		% Rec.	8260B	10/08/07	1
Dibromofluoromethane	118.		% Rec.	8260B	10/08/07	1
4-Bromofluorobenzene	107.		% Rec.	8260B	10/08/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence
Sample ID : AOC 1-2 6 IN
Collected By :
Collection Date : 10/03/07 10:00

ESC Sample # : L313746-02

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	86.9	0.100	%	2540G	10/05/07	1
Volatile Organics						
Acetone	0.12	0.058	mg/kg	8260B	10/07/07	1
Acrylonitrile	BDL	0.012	mg/kg	8260B	10/07/07	1
Benzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Bromobenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Bromodichloromethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
Bromoform	BDL	0.0012	mg/kg	8260B	10/07/07	1
Bromomethane	BDL	0.0058	mg/kg	8260B	10/07/07	1
n-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
sec-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
tert-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Carbon tetrachloride	BDL	0.0012	mg/kg	8260B	10/07/07	1
Chlorobenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Chlorodibromomethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
Chloroethane	BDL	0.0058	mg/kg	8260B	10/07/07	1
2-Chloroethyl vinyl ether	BDL	0.058	mg/kg	8260B	10/07/07	1
Chloroform	BDL	0.0058	mg/kg	8260B	10/07/07	1
Chloromethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
2-Chlorotoluene	BDL	0.0012	mg/kg	8260B	10/07/07	1
4-Chlorotoluene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,2-Dibromo-3-Chloropropane	BDL	0.0058	mg/kg	8260B	10/07/07	1
1,2-Dibromoethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
Dibromomethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,2-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,3-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,4-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Dichlorodifluoromethane	BDL	0.0058	mg/kg	8260B	10/07/07	1
1,1-Dichloroethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,2-Dichloroethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,1-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/07/07	1
cis-1,2-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/07/07	1
trans-1,2-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,2-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,1-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,3-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/07/07	1
cis-1,3-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/07/07	1
trans-1,3-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/07/07	1
2,2-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/07/07	1
Di-isopropyl ether	BDL	0.0012	mg/kg	8260B	10/07/07	1
Ethylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Hexachlorobutadiene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Isopropylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

ESC Sample # : L313746-02

Date Received : October 04, 2007
Description : Knichel Residence

Site ID :

Sample ID : AOC 1-2 6 IN

Project # :

Collected By :
Collection Date : 10/03/07 10:00

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
p-Isopropyltoluene	0.0023	0.0012	mg/kg	8260B	10/07/07	1
2-Butanone (MEK)	BDL	0.012	mg/kg	8260B	10/07/07	1
Methylene Chloride	BDL	0.0058	mg/kg	8260B	10/07/07	1
4-Methyl-2-pentanone (MIBK)	BDL	0.012	mg/kg	8260B	10/07/07	1
Methyl tert-butyl ether	BDL	0.0012	mg/kg	8260B	10/07/07	1
Naphthalene	BDL	0.0058	mg/kg	8260B	10/07/07	1
n-Propylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Styrene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,1,1,2-Tetrachloroethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,1,2,2-Tetrachloroethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
Tetrachloroethene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Toluene	BDL	0.0058	mg/kg	8260B	10/07/07	1
1,2,3-Trichlorobenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,2,4-Trichlorobenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,1,1-Trichloroethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,1,2-Trichloroethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.0012	mg/kg	8260B	10/07/07	1
Trichloroethene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Trichlorofluoromethane	BDL	0.0058	mg/kg	8260B	10/07/07	1
1,2,3-Trichloropropane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,2,4-Trimethylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,3,5-Trimethylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Vinyl chloride	BDL	0.0012	mg/kg	8260B	10/07/07	1
Xylenes, Total	BDL	0.0034	mg/kg	8260B	10/07/07	1
Surrogate Recovery						
Toluene-d8	106.		% Rec.	8260B	10/07/07	1
Dibromofluoromethane	94.3		% Rec.	8260B	10/07/07	1
4-Bromofluorobenzene	85.4		% Rec.	8260B	10/07/07	1

Results listed are dry weight basis.

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence

Sample ID : AOC 1-3 6 IN

Collected By :
Collection Date : 10/03/07 10:41

ESC Sample # : L313746-03

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	82.5	0.100	%	2540G	10/05/07	1
Volatile Organics						
Acetone	0.13	0.061	mg/kg	8260B	10/07/07	1
Acrylonitrile	BDL	0.012	mg/kg	8260B	10/07/07	1
Benzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Bromobenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Bromodichloromethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
Bromoform	BDL	0.0012	mg/kg	8260B	10/07/07	1
Bromomethane	BDL	0.0061	mg/kg	8260B	10/07/07	1
n-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
sec-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
tert-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Carbon tetrachloride	BDL	0.0012	mg/kg	8260B	10/07/07	1
Chlorobenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Chlorodibromomethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
Chloroethane	BDL	0.0061	mg/kg	8260B	10/07/07	1
2-Chloroethyl vinyl ether	BDL	0.061	mg/kg	8260B	10/07/07	1
Chloroform	BDL	0.0061	mg/kg	8260B	10/07/07	1
Chloromethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
2-Chlorotoluene	BDL	0.0012	mg/kg	8260B	10/07/07	1
4-Chlorotoluene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,2-Dibromo-3-Chloropropane	BDL	0.0061	mg/kg	8260B	10/07/07	1
1,2-Dibromoethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
Dibromomethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,2-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,3-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,4-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Dichlorodifluoromethane	BDL	0.0061	mg/kg	8260B	10/07/07	1
1,1-Dichloroethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,2-Dichloroethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,1-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/07/07	1
cis-1,2-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/07/07	1
trans-1,2-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,2-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,1-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,3-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/07/07	1
cis-1,3-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/07/07	1
trans-1,3-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/07/07	1
2,2-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/07/07	1
Di-isopropyl ether	BDL	0.0012	mg/kg	8260B	10/07/07	1
Ethylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Hexachlorobutadiene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Isopropylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

ESC Sample # : L313746-03

Date Received : October 04, 2007
Description : Knichel Residence

Site ID :

Sample ID : AOC 1-3 6 IN

Project # :

Collected By :
Collection Date : 10/03/07 10:41

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
p-Isopropyltoluene	0.0014	0.0012	mg/kg	8260B	10/07/07	1
2-Butanone (MEK)	BDL	0.012	mg/kg	8260B	10/07/07	1
Methylene Chloride	BDL	0.0061	mg/kg	8260B	10/07/07	1
4-Methyl-2-pentanone (MIBK)	BDL	0.012	mg/kg	8260B	10/07/07	1
Methyl tert-butyl ether	BDL	0.0012	mg/kg	8260B	10/07/07	1
Naphthalene	BDL	0.0061	mg/kg	8260B	10/07/07	1
n-Propylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Styrene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,1,1,2-Tetrachloroethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,1,2,2-Tetrachloroethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
Tetrachloroethene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Toluene	BDL	0.0061	mg/kg	8260B	10/07/07	1
1,2,3-Trichlorobenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,2,4-Trichlorobenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,1,1-Trichloroethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,1,2-Trichloroethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.0012	mg/kg	8260B	10/07/07	1
Trichloroethene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Trichlorofluoromethane	BDL	0.0061	mg/kg	8260B	10/07/07	1
1,2,3-Trichloropropane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,2,4-Trimethylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,3,5-Trimethylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Vinyl chloride	BDL	0.0012	mg/kg	8260B	10/07/07	1
Xylenes, Total	BDL	0.0036	mg/kg	8260B	10/07/07	1
Surrogate Recovery						
Toluene-d8	107.		% Rec.	8260B	10/07/07	1
Dibromofluoromethane	91.4		% Rec.	8260B	10/07/07	1
4-Bromofluorobenzene	85.7		% Rec.	8260B	10/07/07	1

Results listed are dry weight basis.

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence
Sample ID : AOC 1-4 6 IN
Collected By :
Collection Date : 10/03/07 10:34

ESC Sample # : L313746-04

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	85.1	0.100	%	2540G	10/05/07	1
Volatile Organics						
Acetone	0.98	2.9	mg/kg	8260B	10/08/07	50
Acrylonitrile	BDL	0.012	mg/kg	8260B	10/07/07	1
Benzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Bromobenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Bromodichloromethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
Bromoform	BDL	0.0012	mg/kg	8260B	10/07/07	1
Bromomethane	BDL	0.0059	mg/kg	8260B	10/07/07	1
n-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
sec-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
tert-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Carbon tetrachloride	BDL	0.0012	mg/kg	8260B	10/07/07	1
Chlorobenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Chlorodibromomethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
Chloroethane	BDL	0.0059	mg/kg	8260B	10/07/07	1
2-Chloroethyl vinyl ether	BDL	0.059	mg/kg	8260B	10/07/07	1
Chloroform	BDL	0.0059	mg/kg	8260B	10/07/07	1
Chloromethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
2-Chlorotoluene	BDL	0.0012	mg/kg	8260B	10/07/07	1
4-Chlorotoluene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,2-Dibromo-3-Chloropropane	BDL	0.0059	mg/kg	8260B	10/07/07	1
1,2-Dibromoethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
Dibromomethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,2-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,3-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,4-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Dichlorodifluoromethane	BDL	0.0059	mg/kg	8260B	10/07/07	1
1,1-Dichloroethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,2-Dichloroethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,1-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/07/07	1
cis-1,2-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/07/07	1
trans-1,2-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,2-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,1-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,3-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/07/07	1
cis-1,3-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/07/07	1
trans-1,3-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/07/07	1
2,2-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/07/07	1
Di-isopropyl ether	BDL	0.0012	mg/kg	8260B	10/07/07	1
Ethylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Hexachlorobutadiene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Isopropylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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Est. 1970

REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence

Sample ID : AOC 1-4 6 IN

Collected By :
Collection Date : 10/03/07 10:34

ESC Sample # : L313746-04

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
p-Isopropyltoluene	0.0019	0.0012	mg/kg	8260B	10/07/07	1
2-Butanone (MEK)	BDL	0.012	mg/kg	8260B	10/07/07	1
Methylene Chloride	BDL	0.0059	mg/kg	8260B	10/07/07	1
4-Methyl-2-pentanone (MIBK)	BDL	0.012	mg/kg	8260B	10/07/07	1
Methyl tert-butyl ether	BDL	0.0012	mg/kg	8260B	10/07/07	1
Naphthalene	BDL	0.0059	mg/kg	8260B	10/07/07	1
n-Propylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Styrene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,1,1,2-Tetrachloroethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,1,2,2-Tetrachloroethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
Tetrachloroethene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Toluene	BDL	0.0059	mg/kg	8260B	10/07/07	1
1,2,3-Trichlorobenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,2,4-Trichlorobenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,1,1-Trichloroethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,1,2-Trichloroethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.0012	mg/kg	8260B	10/07/07	1
Trichloroethene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Trichlorofluoromethane	BDL	0.0059	mg/kg	8260B	10/07/07	1
1,2,3-Trichloropropane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,2,4-Trimethylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,3,5-Trimethylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Vinyl chloride	BDL	0.0012	mg/kg	8260B	10/07/07	1
Xylenes, Total	BDL	0.0035	mg/kg	8260B	10/07/07	1
Surrogate Recovery						
Toluene-d8	104.		% Rec.	8260B	10/07/07	1
Dibromofluoromethane	94.4		% Rec.	8260B	10/07/07	1
4-Bromofluorobenzene	75.2		% Rec.	8260B	10/07/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence

Sample ID : AOC 1-5 6 IN

Collected By :
Collection Date : 10/03/07 11:03

ESC Sample # : L313746-05

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	86.7	0.100	%	2540G	10/05/07	1
Volatile Organics						
Acetone	BDL	0.058	mg/kg	8260B	10/08/07	1
Acrylonitrile	BDL	0.012	mg/kg	8260B	10/08/07	1
Benzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromodichloromethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromoform	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromomethane	BDL	0.0058	mg/kg	8260B	10/08/07	1
n-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
sec-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
tert-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Carbon tetrachloride	BDL	0.0012	mg/kg	8260B	10/08/07	1
Chlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Chlorodibromomethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Chloroethane	BDL	0.0058	mg/kg	8260B	10/08/07	1
2-Chloroethyl vinyl ether	BDL	0.058	mg/kg	8260B	10/08/07	1
Chloroform	BDL	0.0058	mg/kg	8260B	10/08/07	1
Chloromethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
2-Chlorotoluene	BDL	0.0012	mg/kg	8260B	10/08/07	1
4-Chlorotoluene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dibromo-3-Chloropropane	BDL	0.0058	mg/kg	8260B	10/08/07	1
1,2-Dibromoethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Dibromomethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,3-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,4-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Dichlorodifluoromethane	BDL	0.0058	mg/kg	8260B	10/08/07	1
1,1-Dichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
cis-1,2-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
trans-1,2-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,3-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
cis-1,3-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/08/07	1
trans-1,3-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/08/07	1
2,2-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Di-isopropyl ether	BDL	0.0012	mg/kg	8260B	10/08/07	1
Ethylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Hexachlorobutadiene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Isopropylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

ESC Sample # : L313746-05

Date Received : October 04, 2007
Description : Knichel Residence

Site ID :

Sample ID : AOC 1-5 6 IN

Project # :

Collected By :
Collection Date : 10/03/07 11:03

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
p-Isopropyltoluene	BDL	0.0012	mg/kg	8260B	10/08/07	1
2-Butanone (MEK)	BDL	0.012	mg/kg	8260B	10/08/07	1
Methylene Chloride	BDL	0.0058	mg/kg	8260B	10/08/07	1
4-Methyl-2-pentanone (MIBK)	BDL	0.012	mg/kg	8260B	10/08/07	1
Methyl tert-butyl ether	BDL	0.0012	mg/kg	8260B	10/08/07	1
Naphthalene	BDL	0.0058	mg/kg	8260B	10/08/07	1
n-Propylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Styrene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,1,2-Tetrachloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,2,2-Tetrachloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Tetrachloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Toluene	BDL	0.0058	mg/kg	8260B	10/08/07	1
1,2,3-Trichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2,4-Trichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,1-Trichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,2-Trichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.0012	mg/kg	8260B	10/08/07	1
Trichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Trichlorofluoromethane	BDL	0.0058	mg/kg	8260B	10/08/07	1
1,2,3-Trichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2,4-Trimethylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,3,5-Trimethylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Vinyl chloride	BDL	0.0012	mg/kg	8260B	10/08/07	1
Xylenes, Total	BDL	0.0035	mg/kg	8260B	10/08/07	1
Surrogate Recovery						
Toluene-d8	104.		% Rec.	8260B	10/08/07	1
Dibromofluoromethane	104.		% Rec.	8260B	10/08/07	1
4-Bromofluorobenzene	101.		% Rec.	8260B	10/08/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence
Sample ID : AOC 1-6 6 IN
Collected By :
Collection Date : 10/03/07 11:16

ESC Sample # : L313746-06

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	86.7	0.100	%	2540G	10/05/07	1
Volatile Organics						
Acetone	BDL	9.2	mg/kg	8260B	10/07/07	160
Acrylonitrile	BDL	1.8	mg/kg	8260B	10/07/07	160
Benzene	BDL	0.18	mg/kg	8260B	10/07/07	160
Bromobenzene	BDL	0.18	mg/kg	8260B	10/07/07	160
Bromodichloromethane	BDL	0.18	mg/kg	8260B	10/07/07	160
Bromoform	BDL	0.18	mg/kg	8260B	10/07/07	160
Bromomethane	BDL	0.92	mg/kg	8260B	10/07/07	160
n-Butylbenzene	BDL	0.18	mg/kg	8260B	10/07/07	160
sec-Butylbenzene	BDL	0.18	mg/kg	8260B	10/07/07	160
tert-Butylbenzene	BDL	0.18	mg/kg	8260B	10/07/07	160
Carbon tetrachloride	BDL	0.18	mg/kg	8260B	10/07/07	160
Chlorobenzene	BDL	0.18	mg/kg	8260B	10/07/07	160
Chlorodibromomethane	BDL	0.18	mg/kg	8260B	10/07/07	160
Chloroethane	BDL	0.92	mg/kg	8260B	10/07/07	160
2-Chloroethyl vinyl ether	BDL	9.2	mg/kg	8260B	10/07/07	160
Chloroform	BDL	0.92	mg/kg	8260B	10/07/07	160
Chloromethane	BDL	0.18	mg/kg	8260B	10/07/07	160
2-Chlorotoluene	BDL	0.18	mg/kg	8260B	10/07/07	160
4-Chlorotoluene	BDL	0.18	mg/kg	8260B	10/07/07	160
1,2-Dibromo-3-Chloropropane	BDL	0.92	mg/kg	8260B	10/07/07	160
1,2-Dibromoethane	BDL	0.18	mg/kg	8260B	10/07/07	160
Dibromomethane	BDL	0.18	mg/kg	8260B	10/07/07	160
1,2-Dichlorobenzene	BDL	0.18	mg/kg	8260B	10/07/07	160
1,3-Dichlorobenzene	BDL	0.18	mg/kg	8260B	10/07/07	160
1,4-Dichlorobenzene	BDL	0.18	mg/kg	8260B	10/07/07	160
Dichlorodifluoromethane	BDL	0.92	mg/kg	8260B	10/07/07	160
1,1-Dichloroethane	BDL	0.18	mg/kg	8260B	10/07/07	160
1,2-Dichloroethane	BDL	0.18	mg/kg	8260B	10/07/07	160
1,1-Dichloroethene	BDL	0.18	mg/kg	8260B	10/07/07	160
cis-1,2-Dichloroethene	BDL	0.18	mg/kg	8260B	10/07/07	160
trans-1,2-Dichloroethene	BDL	0.18	mg/kg	8260B	10/07/07	160
1,2-Dichloropropane	BDL	0.18	mg/kg	8260B	10/07/07	160
1,1-Dichloropropene	BDL	0.18	mg/kg	8260B	10/07/07	160
1,3-Dichloropropane	BDL	0.18	mg/kg	8260B	10/07/07	160
cis-1,3-Dichloropropene	BDL	0.18	mg/kg	8260B	10/07/07	160
trans-1,3-Dichloropropene	BDL	0.18	mg/kg	8260B	10/07/07	160
2,2-Dichloropropane	BDL	0.18	mg/kg	8260B	10/07/07	160
Di-isopropyl ether	BDL	0.18	mg/kg	8260B	10/07/07	160
Ethylbenzene	14.	0.18	mg/kg	8260B	10/07/07	160
Hexachlorobutadiene	BDL	0.18	mg/kg	8260B	10/07/07	160
Isopropylbenzene	BDL	0.18	mg/kg	8260B	10/07/07	160

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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L313746-06 (V8260) - Target compounds too high to run at a lower dilution.



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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence

Sample ID : AOC 1-6 6 IN

Collected By :
Collection Date : 10/03/07 11:16

ESC Sample # : L313746-06

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
p-Isopropyltoluene	BDL	0.18	mg/kg	8260B	10/07/07	160
2-Butanone (MEK)	BDL	1.8	mg/kg	8260B	10/07/07	160
Methylene Chloride	BDL	0.92	mg/kg	8260B	10/07/07	160
4-Methyl-2-pentanone (MIBK)	BDL	1.8	mg/kg	8260B	10/07/07	160
Methyl tert-butyl ether	BDL	0.18	mg/kg	8260B	10/07/07	160
Naphthalene	BDL	0.92	mg/kg	8260B	10/07/07	160
n-Propylbenzene	BDL	0.18	mg/kg	8260B	10/07/07	160
Styrene	BDL	0.18	mg/kg	8260B	10/07/07	160
1,1,1,2-Tetrachloroethane	BDL	0.18	mg/kg	8260B	10/07/07	160
1,1,2,2-Tetrachloroethane	BDL	0.18	mg/kg	8260B	10/07/07	160
Tetrachloroethene	BDL	0.18	mg/kg	8260B	10/07/07	160
Toluene	BDL	0.92	mg/kg	8260B	10/07/07	160
1,2,3-Trichlorobenzene	BDL	0.18	mg/kg	8260B	10/07/07	160
1,2,4-Trichlorobenzene	BDL	0.18	mg/kg	8260B	10/07/07	160
1,1,1-Trichloroethane	BDL	0.18	mg/kg	8260B	10/07/07	160
1,1,2-Trichloroethane	BDL	0.18	mg/kg	8260B	10/07/07	160
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.18	mg/kg	8260B	10/07/07	160
Trichloroethene	BDL	0.18	mg/kg	8260B	10/07/07	160
Trichlorofluoromethane	BDL	0.92	mg/kg	8260B	10/07/07	160
1,2,3-Trichloropropane	BDL	0.18	mg/kg	8260B	10/07/07	160
1,2,4-Trimethylbenzene	BDL	0.18	mg/kg	8260B	10/07/07	160
1,3,5-Trimethylbenzene	BDL	0.18	mg/kg	8260B	10/07/07	160
Vinyl chloride	BDL	0.18	mg/kg	8260B	10/07/07	160
Xylenes, Total	77.	0.55	mg/kg	8260B	10/07/07	160
Surrogate Recovery						
Toluene-d8	106.		% Rec.	8260B	10/07/07	160
Dibromofluoromethane	92.6		% Rec.	8260B	10/07/07	160
4-Bromofluorobenzene	96.8		% Rec.	8260B	10/07/07	160

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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L313746-06 (V8260) - Target compounds too high to run at a lower dilution.



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Est. 1970

REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence
Sample ID : AOC 1-7 6 IN
Collected By :
Collection Date : 10/03/07 11:35

ESC Sample # : L313746-07

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	85.7	0.100	%	2540G	10/05/07	1
Volatile Organics						
Acetone	BDL	0.058	mg/kg	8260B	10/07/07	1
Acrylonitrile	BDL	0.012	mg/kg	8260B	10/07/07	1
Benzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Bromobenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Bromodichloromethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
Bromoform	BDL	0.0012	mg/kg	8260B	10/07/07	1
Bromomethane	BDL	0.0058	mg/kg	8260B	10/07/07	1
n-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
sec-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
tert-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Carbon tetrachloride	BDL	0.0012	mg/kg	8260B	10/07/07	1
Chlorobenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Chlorodibromomethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
Chloroethane	BDL	0.0058	mg/kg	8260B	10/07/07	1
2-Chloroethyl vinyl ether	BDL	0.058	mg/kg	8260B	10/07/07	1
Chloroform	BDL	0.0058	mg/kg	8260B	10/07/07	1
Chloromethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
2-Chlorotoluene	BDL	0.0012	mg/kg	8260B	10/07/07	1
4-Chlorotoluene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,2-Dibromo-3-Chloropropane	BDL	0.0058	mg/kg	8260B	10/07/07	1
1,2-Dibromoethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
Dibromomethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,2-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,3-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,4-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Dichlorodifluoromethane	BDL	0.0058	mg/kg	8260B	10/07/07	1
1,1-Dichloroethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,2-Dichloroethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,1-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/07/07	1
cis-1,2-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/07/07	1
trans-1,2-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,2-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,1-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,3-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/07/07	1
cis-1,3-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/07/07	1
trans-1,3-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/07/07	1
2,2-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/07/07	1
Di-isopropyl ether	BDL	0.0012	mg/kg	8260B	10/07/07	1
Ethylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Hexachlorobutadiene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Isopropylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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Est. 1970

REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence

Sample ID : AOC 1-7 6 IN

Collected By :
Collection Date : 10/03/07 11:35

ESC Sample # : L313746-07

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
p-Isopropyltoluene	BDL	0.0012	mg/kg	8260B	10/07/07	1
2-Butanone (MEK)	BDL	0.012	mg/kg	8260B	10/07/07	1
Methylene Chloride	BDL	0.0058	mg/kg	8260B	10/07/07	1
4-Methyl-2-pentanone (MIBK)	BDL	0.012	mg/kg	8260B	10/07/07	1
Methyl tert-butyl ether	BDL	0.0012	mg/kg	8260B	10/07/07	1
Naphthalene	BDL	0.0058	mg/kg	8260B	10/07/07	1
n-Propylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Styrene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,1,1,2-Tetrachloroethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,1,2,2-Tetrachloroethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
Tetrachloroethene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Toluene	BDL	0.0058	mg/kg	8260B	10/07/07	1
1,2,3-Trichlorobenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,2,4-Trichlorobenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,1,1-Trichloroethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,1,2-Trichloroethane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.0012	mg/kg	8260B	10/07/07	1
Trichloroethene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Trichlorofluoromethane	BDL	0.0058	mg/kg	8260B	10/07/07	1
1,2,3-Trichloropropane	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,2,4-Trimethylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
1,3,5-Trimethylbenzene	BDL	0.0012	mg/kg	8260B	10/07/07	1
Vinyl chloride	BDL	0.0012	mg/kg	8260B	10/07/07	1
Xylenes, Total	BDL	0.0035	mg/kg	8260B	10/07/07	1
Surrogate Recovery						
Toluene-d8	106.		% Rec.	8260B	10/07/07	1
Dibromofluoromethane	101.		% Rec.	8260B	10/07/07	1
4-Bromofluorobenzene	89.5		% Rec.	8260B	10/07/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

ESC Sample # : L313746-08

Date Received : October 04, 2007
Description : Knichel Residence

Site ID :

Sample ID : AOC 1-8 6 IN

Project # :

Collected By :
Collection Date : 10/03/07 11:58

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	83.4	0.100	%	2540G	10/05/07	1
Volatile Organics						
Acetone	0.12	0.060	mg/kg	8260B	10/08/07	1
Acrylonitrile	BDL	0.012	mg/kg	8260B	10/08/07	1
Benzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromodichloromethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromoform	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromomethane	BDL	0.0060	mg/kg	8260B	10/08/07	1
n-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
sec-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
tert-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Carbon tetrachloride	BDL	0.0012	mg/kg	8260B	10/08/07	1
Chlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Chlorodibromomethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Chloroethane	BDL	0.0060	mg/kg	8260B	10/08/07	1
2-Chloroethyl vinyl ether	BDL	0.060	mg/kg	8260B	10/08/07	1
Chloroform	BDL	0.0060	mg/kg	8260B	10/08/07	1
Chloromethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
2-Chlorotoluene	BDL	0.0012	mg/kg	8260B	10/08/07	1
4-Chlorotoluene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dibromo-3-Chloropropane	BDL	0.0060	mg/kg	8260B	10/08/07	1
1,2-Dibromoethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Dibromomethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,3-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,4-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Dichlorodifluoromethane	BDL	0.0060	mg/kg	8260B	10/08/07	1
1,1-Dichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
cis-1,2-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
trans-1,2-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,3-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
cis-1,3-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/08/07	1
trans-1,3-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/08/07	1
2,2-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Di-isopropyl ether	BDL	0.0012	mg/kg	8260B	10/08/07	1
Ethylbenzene	0.018	0.0012	mg/kg	8260B	10/08/07	1
Hexachlorobutadiene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Isopropylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

ESC Sample # : L313746-08

Date Received : October 04, 2007
Description : Knichel Residence

Site ID :

Sample ID : AOC 1-8 6 IN

Project # :

Collected By :
Collection Date : 10/03/07 11:58

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
p-Isopropyltoluene	0.0033	0.0012	mg/kg	8260B	10/08/07	1
2-Butanone (MEK)	BDL	0.012	mg/kg	8260B	10/08/07	1
Methylene Chloride	BDL	0.0060	mg/kg	8260B	10/08/07	1
4-Methyl-2-pentanone (MIBK)	BDL	0.012	mg/kg	8260B	10/08/07	1
Methyl tert-butyl ether	BDL	0.0012	mg/kg	8260B	10/08/07	1
Naphthalene	BDL	0.0060	mg/kg	8260B	10/08/07	1
n-Propylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Styrene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,1,2-Tetrachloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,2,2-Tetrachloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Tetrachloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Toluene	BDL	0.0060	mg/kg	8260B	10/08/07	1
1,2,3-Trichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2,4-Trichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,1-Trichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,2-Trichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.0012	mg/kg	8260B	10/08/07	1
Trichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Trichlorofluoromethane	BDL	0.0060	mg/kg	8260B	10/08/07	1
1,2,3-Trichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2,4-Trimethylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,3,5-Trimethylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Vinyl chloride	BDL	0.0012	mg/kg	8260B	10/08/07	1
Xylenes, Total	0.10	0.0036	mg/kg	8260B	10/08/07	1
Surrogate Recovery						
Toluene-d8	105.		% Rec.	8260B	10/08/07	1
Dibromofluoromethane	103.		% Rec.	8260B	10/08/07	1
4-Bromofluorobenzene	90.6		% Rec.	8260B	10/08/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence
Sample ID : AOC 1-9 6 IN
Collected By :
Collection Date : 10/03/07 13:29

ESC Sample # : L313746-09

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	81.6	0.100	%	2540G	10/05/07	1
Volatile Organics						
Acetone	0.13	0.061	mg/kg	8260B	10/08/07	1
Acrylonitrile	BDL	0.012	mg/kg	8260B	10/08/07	1
Benzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromodichloromethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromoform	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromomethane	BDL	0.0061	mg/kg	8260B	10/08/07	1
n-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
sec-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
tert-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Carbon tetrachloride	BDL	0.0012	mg/kg	8260B	10/08/07	1
Chlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Chlorodibromomethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Chloroethane	BDL	0.0061	mg/kg	8260B	10/08/07	1
2-Chloroethyl vinyl ether	BDL	0.061	mg/kg	8260B	10/08/07	1
Chloroform	BDL	0.0061	mg/kg	8260B	10/08/07	1
Chloromethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
2-Chlorotoluene	BDL	0.0012	mg/kg	8260B	10/08/07	1
4-Chlorotoluene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dibromo-3-Chloropropane	BDL	0.0061	mg/kg	8260B	10/08/07	1
1,2-Dibromoethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Dibromomethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,3-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,4-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Dichlorodifluoromethane	BDL	0.0061	mg/kg	8260B	10/08/07	1
1,1-Dichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
cis-1,2-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
trans-1,2-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,3-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
cis-1,3-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/08/07	1
trans-1,3-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/08/07	1
2,2-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Di-isopropyl ether	BDL	0.0012	mg/kg	8260B	10/08/07	1
Ethylbenzene	0.62	0.062	mg/kg	8260B	10/08/07	51
Hexachlorobutadiene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Isopropylbenzene	0.0042	0.0012	mg/kg	8260B	10/08/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence
Sample ID : AOC 1-9 6 IN
Collected By :
Collection Date : 10/03/07 13:29

ESC Sample # : L313746-09

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
p-Isopropyltoluene	BDL	0.0012	mg/kg	8260B	10/08/07	1
2-Butanone (MEK)	BDL	0.012	mg/kg	8260B	10/08/07	1
Methylene Chloride	BDL	0.0061	mg/kg	8260B	10/08/07	1
4-Methyl-2-pentanone (MIBK)	BDL	0.012	mg/kg	8260B	10/08/07	1
Methyl tert-butyl ether	BDL	0.0012	mg/kg	8260B	10/08/07	1
Naphthalene	BDL	0.0061	mg/kg	8260B	10/08/07	1
n-Propylbenzene	0.0020	0.0012	mg/kg	8260B	10/08/07	1
Styrene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,1,2-Tetrachloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,2,2-Tetrachloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Tetrachloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Toluene	BDL	0.0061	mg/kg	8260B	10/08/07	1
1,2,3-Trichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2,4-Trichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,1-Trichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,2-Trichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.0012	mg/kg	8260B	10/08/07	1
Trichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Trichlorofluoromethane	BDL	0.0061	mg/kg	8260B	10/08/07	1
1,2,3-Trichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2,4-Trimethylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,3,5-Trimethylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Vinyl chloride	BDL	0.0012	mg/kg	8260B	10/08/07	1
Xylenes, Total	3.3	0.19	mg/kg	8260B	10/08/07	51
Surrogate Recovery						
Toluene-d8	104.		% Rec.	8260B	10/08/07	1
Dibromofluoromethane	103.		% Rec.	8260B	10/08/07	1
4-Bromofluorobenzene	106.		% Rec.	8260B	10/08/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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Est. 1970

REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence
Sample ID : AOC 1-10
Collected By :
Collection Date : 10/03/07 15:22

ESC Sample # : L313746-10

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	89.8	0.100	%	2540G	10/05/07	1
Volatile Organics						
Acetone	0.19	0.056	mg/kg	8260B	10/08/07	1
Acrylonitrile	BDL	0.011	mg/kg	8260B	10/08/07	1
Benzene	BDL	0.0011	mg/kg	8260B	10/08/07	1
Bromobenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1
Bromodichloromethane	BDL	0.0011	mg/kg	8260B	10/08/07	1
Bromoform	BDL	0.0011	mg/kg	8260B	10/08/07	1
Bromomethane	BDL	0.0056	mg/kg	8260B	10/08/07	1
n-Butylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1
sec-Butylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1
tert-Butylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1
Carbon tetrachloride	BDL	0.0011	mg/kg	8260B	10/08/07	1
Chlorobenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1
Chlorodibromomethane	BDL	0.0011	mg/kg	8260B	10/08/07	1
Chloroethane	BDL	0.0056	mg/kg	8260B	10/08/07	1
2-Chloroethyl vinyl ether	BDL	0.056	mg/kg	8260B	10/08/07	1
Chloroform	BDL	0.0056	mg/kg	8260B	10/08/07	1
Chloromethane	BDL	0.0011	mg/kg	8260B	10/08/07	1
2-Chlorotoluene	BDL	0.0011	mg/kg	8260B	10/08/07	1
4-Chlorotoluene	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,2-Dibromo-3-Chloropropane	BDL	0.0056	mg/kg	8260B	10/08/07	1
1,2-Dibromoethane	BDL	0.0011	mg/kg	8260B	10/08/07	1
Dibromomethane	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,2-Dichlorobenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,3-Dichlorobenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,4-Dichlorobenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1
Dichlorodifluoromethane	BDL	0.0056	mg/kg	8260B	10/08/07	1
1,1-Dichloroethane	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,2-Dichloroethane	BDL	0.0011	mg/kg	8260B	10/08/07	1
cis-1,2-Dichloroethene	BDL	0.0011	mg/kg	8260B	10/08/07	1
trans-1,2-Dichloroethene	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,2-Dichloropropane	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,1-Dichloropropene	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,3-Dichloropropane	BDL	0.0011	mg/kg	8260B	10/08/07	1
cis-1,3-Dichloropropene	BDL	0.0011	mg/kg	8260B	10/08/07	1
trans-1,3-Dichloropropene	BDL	0.0011	mg/kg	8260B	10/08/07	1
2,2-Dichloropropane	BDL	0.0011	mg/kg	8260B	10/08/07	1
Di-isopropyl ether	BDL	0.0011	mg/kg	8260B	10/08/07	1
Ethylbenzene	0.0022	0.0011	mg/kg	8260B	10/08/07	1
Hexachlorobutadiene	BDL	0.0011	mg/kg	8260B	10/08/07	1
Isopropylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

October 08, 2007

Date Received : October 04, 2007
Description : Knichel Residence
Sample ID : AOC 1-10
Collected By :
Collection Date : 10/03/07 15:22

ESC Sample # : L313746-10

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
p-Isopropyltoluene	BDL	0.0011	mg/kg	8260B	10/08/07	1
2-Butanone (MEK)	BDL	0.011	mg/kg	8260B	10/08/07	1
Methylene Chloride	BDL	0.0056	mg/kg	8260B	10/08/07	1
4-Methyl-2-pentanone (MIBK)	BDL	0.011	mg/kg	8260B	10/08/07	1
Methyl tert-butyl ether	BDL	0.0011	mg/kg	8260B	10/08/07	1
Naphthalene	BDL	0.0056	mg/kg	8260B	10/08/07	1
n-Propylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1
Styrene	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,1,1,2-Tetrachloroethane	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,1,2,2-Tetrachloroethane	BDL	0.0011	mg/kg	8260B	10/08/07	1
Tetrachloroethene	BDL	0.0011	mg/kg	8260B	10/08/07	1
Toluene	BDL	0.0056	mg/kg	8260B	10/08/07	1
1,2,3-Trichlorobenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,2,4-Trichlorobenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,1,1-Trichloroethane	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,1,2-Trichloroethane	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.0011	mg/kg	8260B	10/08/07	1
Trichloroethene	BDL	0.0011	mg/kg	8260B	10/08/07	1
Trichlorofluoromethane	BDL	0.0056	mg/kg	8260B	10/08/07	1
1,2,3-Trichloropropane	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,2,4-Trimethylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,3,5-Trimethylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1
Vinyl chloride	BDL	0.0011	mg/kg	8260B	10/08/07	1
Xylenes, Total	0.017	0.0033	mg/kg	8260B	10/08/07	1
Surrogate Recovery						
Toluene-d8	98.6		% Rec.	8260B	10/08/07	1
Dibromofluoromethane	107.		% Rec.	8260B	10/08/07	1
4-Bromofluorobenzene	68.1		% Rec.	8260B	10/08/07	1

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

ESC Sample # : L313746-11

Date Received : October 04, 2007
Description : Knichel Residence

Site ID :

Sample ID : AOC 2-1 6 IN

Project # :

Collected By :
Collection Date : 10/03/07 13:37

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	82.2	0.100	%	2540G	10/05/07	1
Volatile Organics						
Acetone	BDL	0.061	mg/kg	8260B	10/08/07	1
Acrylonitrile	BDL	0.012	mg/kg	8260B	10/08/07	1
Benzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromodichloromethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromoform	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromomethane	BDL	0.0061	mg/kg	8260B	10/08/07	1
n-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
sec-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
tert-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Carbon tetrachloride	BDL	0.0012	mg/kg	8260B	10/08/07	1
Chlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Chlorodibromomethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Chloroethane	BDL	0.0061	mg/kg	8260B	10/08/07	1
2-Chloroethyl vinyl ether	BDL	0.061	mg/kg	8260B	10/08/07	1
Chloroform	BDL	0.0061	mg/kg	8260B	10/08/07	1
Chloromethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
2-Chlorotoluene	BDL	0.0012	mg/kg	8260B	10/08/07	1
4-Chlorotoluene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dibromo-3-Chloropropane	BDL	0.0061	mg/kg	8260B	10/08/07	1
1,2-Dibromoethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Dibromomethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,3-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,4-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Dichlorodifluoromethane	BDL	0.0061	mg/kg	8260B	10/08/07	1
1,1-Dichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
cis-1,2-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
trans-1,2-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,3-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
cis-1,3-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/08/07	1
trans-1,3-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/08/07	1
2,2-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Di-isopropyl ether	BDL	0.0012	mg/kg	8260B	10/08/07	1
Ethylbenzene	0.097	0.095	mg/kg	8260B	10/08/07	78
Hexachlorobutadiene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Isopropylbenzene	0.0023	0.0012	mg/kg	8260B	10/08/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

October 08, 2007

Date Received : October 04, 2007
Description : Knichel Residence

ESC Sample # : L313746-11

Sample ID : AOC 2-1 6 IN

Site ID :

Collected By :
Collection Date : 10/03/07 13:37

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
p-Isopropyltoluene	BDL	0.0012	mg/kg	8260B	10/08/07	1
2-Butanone (MEK)	BDL	0.012	mg/kg	8260B	10/08/07	1
Methylene Chloride	BDL	0.0061	mg/kg	8260B	10/08/07	1
4-Methyl-2-pentanone (MIBK)	BDL	0.012	mg/kg	8260B	10/08/07	1
Methyl tert-butyl ether	BDL	0.0012	mg/kg	8260B	10/08/07	1
Naphthalene	BDL	0.0061	mg/kg	8260B	10/08/07	1
n-Propylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Styrene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,1,2-Tetrachloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,2,2-Tetrachloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Tetrachloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Toluene	BDL	0.0061	mg/kg	8260B	10/08/07	1
1,2,3-Trichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2,4-Trichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,1-Trichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,2-Trichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.0012	mg/kg	8260B	10/08/07	1
Trichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Trichlorofluoromethane	BDL	0.0061	mg/kg	8260B	10/08/07	1
1,2,3-Trichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2,4-Trimethylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,3,5-Trimethylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Vinyl chloride	BDL	0.0012	mg/kg	8260B	10/08/07	1
Xylenes, Total	0.64	0.28	mg/kg	8260B	10/08/07	78
Surrogate Recovery						
Toluene-d8	117.		% Rec.	8260B	10/08/07	1
Dibromofluoromethane	116.		% Rec.	8260B	10/08/07	1
4-Bromofluorobenzene	112.		% Rec.	8260B	10/08/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence
Sample ID : AOC 2-2 6 IN
Collected By :
Collection Date : 10/03/07 13:54

ESC Sample # : L313746-12

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	83.2	0.100	%	2540G	10/05/07	1
Volatile Organics						
Acetone	BDL	0.060	mg/kg	8260B	10/08/07	1
Acrylonitrile	BDL	0.012	mg/kg	8260B	10/08/07	1
Benzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromodichloromethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromoform	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromomethane	BDL	0.0060	mg/kg	8260B	10/08/07	1
n-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
sec-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
tert-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Carbon tetrachloride	BDL	0.0012	mg/kg	8260B	10/08/07	1
Chlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Chlorodibromomethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Chloroethane	BDL	0.0060	mg/kg	8260B	10/08/07	1
2-Chloroethyl vinyl ether	BDL	0.060	mg/kg	8260B	10/08/07	1
Chloroform	BDL	0.0060	mg/kg	8260B	10/08/07	1
Chloromethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
2-Chlorotoluene	BDL	0.0012	mg/kg	8260B	10/08/07	1
4-Chlorotoluene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dibromo-3-Chloropropane	BDL	0.0060	mg/kg	8260B	10/08/07	1
1,2-Dibromoethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Dibromomethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,3-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,4-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Dichlorodifluoromethane	BDL	0.0060	mg/kg	8260B	10/08/07	1
1,1-Dichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
cis-1,2-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
trans-1,2-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,3-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
cis-1,3-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/08/07	1
trans-1,3-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/08/07	1
2,2-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Di-isopropyl ether	BDL	0.0012	mg/kg	8260B	10/08/07	1
Ethylbenzene	0.0014	0.0012	mg/kg	8260B	10/08/07	1
Hexachlorobutadiene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Isopropylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence
Sample ID : AOC 2-2 6 IN
Collected By :
Collection Date : 10/03/07 13:54

ESC Sample # : L313746-12

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
p-Isopropyltoluene	BDL	0.0012	mg/kg	8260B	10/08/07	1
2-Butanone (MEK)	BDL	0.012	mg/kg	8260B	10/08/07	1
Methylene Chloride	BDL	0.0060	mg/kg	8260B	10/08/07	1
4-Methyl-2-pentanone (MIBK)	BDL	0.012	mg/kg	8260B	10/08/07	1
Methyl tert-butyl ether	BDL	0.0012	mg/kg	8260B	10/08/07	1
Naphthalene	BDL	0.0060	mg/kg	8260B	10/08/07	1
n-Propylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Styrene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,1,2-Tetrachloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,2,2-Tetrachloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Tetrachloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Toluene	BDL	0.0060	mg/kg	8260B	10/08/07	1
1,2,3-Trichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2,4-Trichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,1-Trichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,2-Trichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.0012	mg/kg	8260B	10/08/07	1
Trichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Trichlorofluoromethane	BDL	0.0060	mg/kg	8260B	10/08/07	1
1,2,3-Trichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2,4-Trimethylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,3,5-Trimethylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Vinyl chloride	BDL	0.0012	mg/kg	8260B	10/08/07	1
Xylenes, Total	0.026	0.0036	mg/kg	8260B	10/08/07	1
Surrogate Recovery						
Toluene-d8	105.		% Rec.	8260B	10/08/07	1
Dibromofluoromethane	104.		% Rec.	8260B	10/08/07	1
4-Bromofluorobenzene	99.9		% Rec.	8260B	10/08/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence
Sample ID : AOC 2-3 6 IN
Collected By :
Collection Date : 10/03/07 14:04

ESC Sample # : L313746-13

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	84.3	0.100	%	2540G	10/05/07	1
Volatile Organics						
Acetone	BDL	0.059	mg/kg	8260B	10/08/07	1
Acrylonitrile	BDL	0.012	mg/kg	8260B	10/08/07	1
Benzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromodichloromethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromoform	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromomethane	BDL	0.0059	mg/kg	8260B	10/08/07	1
n-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
sec-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
tert-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Carbon tetrachloride	BDL	0.0012	mg/kg	8260B	10/08/07	1
Chlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Chlorodibromomethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Chloroethane	BDL	0.0059	mg/kg	8260B	10/08/07	1
2-Chloroethyl vinyl ether	BDL	0.059	mg/kg	8260B	10/08/07	1
Chloroform	BDL	0.0059	mg/kg	8260B	10/08/07	1
Chloromethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
2-Chlorotoluene	BDL	0.0012	mg/kg	8260B	10/08/07	1
4-Chlorotoluene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dibromo-3-Chloropropane	BDL	0.0059	mg/kg	8260B	10/08/07	1
1,2-Dibromoethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Dibromomethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,3-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,4-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Dichlorodifluoromethane	BDL	0.0059	mg/kg	8260B	10/08/07	1
1,1-Dichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
cis-1,2-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
trans-1,2-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,3-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
cis-1,3-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/08/07	1
trans-1,3-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/08/07	1
2,2-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Di-isopropyl ether	BDL	0.0012	mg/kg	8260B	10/08/07	1
Ethylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Hexachlorobutadiene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Isopropylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence

Sample ID : AOC 2-3 6 IN

Collected By :
Collection Date : 10/03/07 14:04

ESC Sample # : L313746-13

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
p-Isopropyltoluene	BDL	0.0012	mg/kg	8260B	10/08/07	1
2-Butanone (MEK)	BDL	0.012	mg/kg	8260B	10/08/07	1
Methylene Chloride	BDL	0.0059	mg/kg	8260B	10/08/07	1
4-Methyl-2-pentanone (MIBK)	BDL	0.012	mg/kg	8260B	10/08/07	1
Methyl tert-butyl ether	BDL	0.0012	mg/kg	8260B	10/08/07	1
Naphthalene	BDL	0.0059	mg/kg	8260B	10/08/07	1
n-Propylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Styrene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,1,2-Tetrachloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,2,2-Tetrachloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Tetrachloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Toluene	BDL	0.0059	mg/kg	8260B	10/08/07	1
1,2,3-Trichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2,4-Trichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,1-Trichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,2-Trichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.0012	mg/kg	8260B	10/08/07	1
Trichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Trichlorofluoromethane	BDL	0.0059	mg/kg	8260B	10/08/07	1
1,2,3-Trichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2,4-Trimethylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,3,5-Trimethylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Vinyl chloride	BDL	0.0012	mg/kg	8260B	10/08/07	1
Xylenes, Total	0.0071	0.0036	mg/kg	8260B	10/08/07	1
Surrogate Recovery						
Toluene-d8	112.		% Rec.	8260B	10/08/07	1
Dibromofluoromethane	118.		% Rec.	8260B	10/08/07	1
4-Bromofluorobenzene	106.		% Rec.	8260B	10/08/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence
Sample ID : AOC 2-4
Collected By :
Collection Date : 10/03/07 14:06

ESC Sample # : L313746-14

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	81.7	0.100	%	2540G	10/05/07	1
Volatile Organics						
Acetone	BDL	5.0	mg/kg	8260B	10/08/07	82
Acrylonitrile	BDL	1.0	mg/kg	8260B	10/08/07	82
Benzene	BDL	0.10	mg/kg	8260B	10/08/07	82
Bromobenzene	BDL	0.10	mg/kg	8260B	10/08/07	82
Bromodichloromethane	BDL	0.10	mg/kg	8260B	10/08/07	82
Bromoform	BDL	0.10	mg/kg	8260B	10/08/07	82
Bromomethane	BDL	0.50	mg/kg	8260B	10/08/07	82
n-Butylbenzene	BDL	0.10	mg/kg	8260B	10/08/07	82
sec-Butylbenzene	BDL	0.10	mg/kg	8260B	10/08/07	82
tert-Butylbenzene	BDL	0.10	mg/kg	8260B	10/08/07	82
Carbon tetrachloride	BDL	0.10	mg/kg	8260B	10/08/07	82
Chlorobenzene	BDL	0.10	mg/kg	8260B	10/08/07	82
Chlorodibromomethane	BDL	0.10	mg/kg	8260B	10/08/07	82
Chloroethane	BDL	0.50	mg/kg	8260B	10/08/07	82
2-Chloroethyl vinyl ether	BDL	5.0	mg/kg	8260B	10/08/07	82
Chloroform	BDL	0.50	mg/kg	8260B	10/08/07	82
Chloromethane	BDL	0.10	mg/kg	8260B	10/08/07	82
2-Chlorotoluene	BDL	0.10	mg/kg	8260B	10/08/07	82
4-Chlorotoluene	BDL	0.10	mg/kg	8260B	10/08/07	82
1,2-Dibromo-3-Chloropropane	BDL	0.50	mg/kg	8260B	10/08/07	82
1,2-Dibromoethane	BDL	0.10	mg/kg	8260B	10/08/07	82
Dibromomethane	BDL	0.10	mg/kg	8260B	10/08/07	82
1,2-Dichlorobenzene	BDL	0.10	mg/kg	8260B	10/08/07	82
1,3-Dichlorobenzene	BDL	0.10	mg/kg	8260B	10/08/07	82
1,4-Dichlorobenzene	BDL	0.10	mg/kg	8260B	10/08/07	82
Dichlorodifluoromethane	BDL	0.50	mg/kg	8260B	10/08/07	82
1,1-Dichloroethane	BDL	0.10	mg/kg	8260B	10/08/07	82
1,2-Dichloroethane	BDL	0.10	mg/kg	8260B	10/08/07	82
1,1-Dichloroethene	BDL	0.10	mg/kg	8260B	10/08/07	82
cis-1,2-Dichloroethene	BDL	0.10	mg/kg	8260B	10/08/07	82
trans-1,2-Dichloroethene	BDL	0.10	mg/kg	8260B	10/08/07	82
1,2-Dichloropropane	BDL	0.10	mg/kg	8260B	10/08/07	82
1,1-Dichloropropene	BDL	0.10	mg/kg	8260B	10/08/07	82
1,3-Dichloropropane	BDL	0.10	mg/kg	8260B	10/08/07	82
cis-1,3-Dichloropropene	BDL	0.10	mg/kg	8260B	10/08/07	82
trans-1,3-Dichloropropene	BDL	0.10	mg/kg	8260B	10/08/07	82
2,2-Dichloropropane	BDL	0.10	mg/kg	8260B	10/08/07	82
Di-isopropyl ether	BDL	0.10	mg/kg	8260B	10/08/07	82
Ethylbenzene	0.52	0.10	mg/kg	8260B	10/08/07	82
Hexachlorobutadiene	BDL	0.10	mg/kg	8260B	10/08/07	82
Isopropylbenzene	BDL	0.10	mg/kg	8260B	10/08/07	82

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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L313746-14 (V8260) - Target compounds too high to run at a lower dilution.



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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence

Sample ID : AOC 2-4

Collected By :
Collection Date : 10/03/07 14:06

ESC Sample # : L313746-14

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
p-Isopropyltoluene	BDL	0.10	mg/kg	8260B	10/08/07	82
2-Butanone (MEK)	BDL	1.0	mg/kg	8260B	10/08/07	82
Methylene Chloride	BDL	0.50	mg/kg	8260B	10/08/07	82
4-Methyl-2-pentanone (MIBK)	BDL	1.0	mg/kg	8260B	10/08/07	82
Methyl tert-butyl ether	BDL	0.10	mg/kg	8260B	10/08/07	82
Naphthalene	BDL	0.50	mg/kg	8260B	10/08/07	82
n-Propylbenzene	BDL	0.10	mg/kg	8260B	10/08/07	82
Styrene	BDL	0.10	mg/kg	8260B	10/08/07	82
1,1,1,2-Tetrachloroethane	BDL	0.10	mg/kg	8260B	10/08/07	82
1,1,2,2-Tetrachloroethane	BDL	0.10	mg/kg	8260B	10/08/07	82
Tetrachloroethene	BDL	0.10	mg/kg	8260B	10/08/07	82
Toluene	BDL	0.50	mg/kg	8260B	10/08/07	82
1,2,3-Trichlorobenzene	BDL	0.10	mg/kg	8260B	10/08/07	82
1,2,4-Trichlorobenzene	BDL	0.10	mg/kg	8260B	10/08/07	82
1,1,1-Trichloroethane	BDL	0.10	mg/kg	8260B	10/08/07	82
1,1,2-Trichloroethane	BDL	0.10	mg/kg	8260B	10/08/07	82
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.10	mg/kg	8260B	10/08/07	82
Trichloroethene	BDL	0.10	mg/kg	8260B	10/08/07	82
Trichlorofluoromethane	BDL	0.50	mg/kg	8260B	10/08/07	82
1,2,3-Trichloropropane	BDL	0.10	mg/kg	8260B	10/08/07	82
1,2,4-Trimethylbenzene	BDL	0.10	mg/kg	8260B	10/08/07	82
1,3,5-Trimethylbenzene	BDL	0.10	mg/kg	8260B	10/08/07	82
Vinyl chloride	BDL	0.10	mg/kg	8260B	10/08/07	82
Xylenes, Total	5.5	0.30	mg/kg	8260B	10/08/07	82
Surrogate Recovery						
Toluene-d8	114.		% Rec.	8260B	10/08/07	82
Dibromofluoromethane	117.		% Rec.	8260B	10/08/07	82
4-Bromofluorobenzene	107.		% Rec.	8260B	10/08/07	82

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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L313746-14 (V8260) - Target compounds too high to run at a lower dilution.



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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence
Sample ID : AOC 2-5 6 IN
Collected By :
Collection Date : 10/03/07 14:20

ESC Sample # : L313746-15

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	83.8	0.100	%	2540G	10/05/07	1
Volatile Organics						
Acetone	BDL	0.060	mg/kg	8260B	10/08/07	1
Acrylonitrile	BDL	0.012	mg/kg	8260B	10/08/07	1
Benzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromodichloromethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromoform	BDL	0.0012	mg/kg	8260B	10/08/07	1
Bromomethane	BDL	0.0060	mg/kg	8260B	10/08/07	1
n-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
sec-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
tert-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Carbon tetrachloride	BDL	0.0012	mg/kg	8260B	10/08/07	1
Chlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Chlorodibromomethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Chloroethane	BDL	0.0060	mg/kg	8260B	10/08/07	1
2-Chloroethyl vinyl ether	BDL	0.060	mg/kg	8260B	10/08/07	1
Chloroform	BDL	0.0060	mg/kg	8260B	10/08/07	1
Chloromethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
2-Chlorotoluene	BDL	0.0012	mg/kg	8260B	10/08/07	1
4-Chlorotoluene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dibromo-3-Chloropropane	BDL	0.0060	mg/kg	8260B	10/08/07	1
1,2-Dibromoethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Dibromomethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,3-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,4-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Dichlorodifluoromethane	BDL	0.0060	mg/kg	8260B	10/08/07	1
1,1-Dichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
cis-1,2-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
trans-1,2-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,3-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
cis-1,3-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/08/07	1
trans-1,3-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/08/07	1
2,2-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Di-isopropyl ether	BDL	0.0012	mg/kg	8260B	10/08/07	1
Ethylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Hexachlorobutadiene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Isopropylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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Est. 1970

REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence
Sample ID : AOC 2-5 6 IN
Collected By :
Collection Date : 10/03/07 14:20

ESC Sample # : L313746-15

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
p-Isopropyltoluene	BDL	0.0012	mg/kg	8260B	10/08/07	1
2-Butanone (MEK)	BDL	0.012	mg/kg	8260B	10/08/07	1
Methylene Chloride	BDL	0.0060	mg/kg	8260B	10/08/07	1
4-Methyl-2-pentanone (MIBK)	BDL	0.012	mg/kg	8260B	10/08/07	1
Methyl tert-butyl ether	BDL	0.0012	mg/kg	8260B	10/08/07	1
Naphthalene	BDL	0.0060	mg/kg	8260B	10/08/07	1
n-Propylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Styrene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,1,2-Tetrachloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,2,2-Tetrachloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
Tetrachloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Toluene	BDL	0.0060	mg/kg	8260B	10/08/07	1
1,2,3-Trichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2,4-Trichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,1-Trichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,2-Trichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.0012	mg/kg	8260B	10/08/07	1
Trichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Trichlorofluoromethane	BDL	0.0060	mg/kg	8260B	10/08/07	1
1,2,3-Trichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,2,4-Trimethylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
1,3,5-Trimethylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1
Vinyl chloride	BDL	0.0012	mg/kg	8260B	10/08/07	1
Xylenes, Total	BDL	0.0036	mg/kg	8260B	10/08/07	1
Surrogate Recovery						
Toluene-d8	113.		% Rec.	8260B	10/08/07	1
Dibromofluoromethane	118.		% Rec.	8260B	10/08/07	1
4-Bromofluorobenzene	102.		% Rec.	8260B	10/08/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

ESC Sample # : L313746-16

Date Received : October 04, 2007
Description : Knichel Residence

Site ID :

Sample ID : AOC 3-1 6 IN

Project # :

Collected By :
Collection Date : 10/03/07 14:54

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	93.9	0.100	%	2540G	10/05/07	1
Volatile Organics						
Acetone	1.1	0.061	mg/kg	8260B	10/08/07	1.14
Acrylonitrile	BDL	0.012	mg/kg	8260B	10/08/07	1.14
Benzene	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
Bromobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
Bromodichloromethane	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
Bromoform	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
Bromomethane	BDL	0.0061	mg/kg	8260B	10/08/07	1.14
n-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
sec-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
tert-Butylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
Carbon tetrachloride	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
Chlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
Chlorodibromomethane	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
Chloroethane	BDL	0.0061	mg/kg	8260B	10/08/07	1.14
2-Chloroethyl vinyl ether	BDL	0.061	mg/kg	8260B	10/08/07	1.14
Chloroform	BDL	0.0061	mg/kg	8260B	10/08/07	1.14
Chloromethane	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
2-Chlorotoluene	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
4-Chlorotoluene	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
1,2-Dibromo-3-Chloropropane	BDL	0.0061	mg/kg	8260B	10/08/07	1.14
1,2-Dibromoethane	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
Dibromomethane	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
1,2-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
1,3-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
1,4-Dichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
Dichlorodifluoromethane	BDL	0.0061	mg/kg	8260B	10/08/07	1.14
1,1-Dichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
1,2-Dichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
1,1-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
cis-1,2-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
trans-1,2-Dichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
1,2-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
1,1-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
1,3-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
cis-1,3-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
trans-1,3-Dichloropropene	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
2,2-Dichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
Di-isopropyl ether	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
Ethylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
Hexachlorobutadiene	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
Isopropylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1.14

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

ESC Sample # : L313746-16

Date Received : October 04, 2007
Description : Knichel Residence

Site ID :

Sample ID : AOC 3-1 6 IN

Project # :

Collected By :
Collection Date : 10/03/07 14:54

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
p-Isopropyltoluene	0.0025	0.0012	mg/kg	8260B	10/08/07	1.14
2-Butanone (MEK)	BDL	0.012	mg/kg	8260B	10/08/07	1.14
Methylene Chloride	BDL	0.0061	mg/kg	8260B	10/08/07	1.14
4-Methyl-2-pentanone (MIBK)	BDL	0.012	mg/kg	8260B	10/08/07	1.14
Methyl tert-butyl ether	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
Naphthalene	BDL	0.0061	mg/kg	8260B	10/08/07	1.14
n-Propylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
Styrene	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
1,1,1,2-Tetrachloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
1,1,2,2-Tetrachloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
Tetrachloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
Toluene	BDL	0.0061	mg/kg	8260B	10/08/07	1.14
1,2,3-Trichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
1,2,4-Trichlorobenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
1,1,1-Trichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
1,1,2-Trichloroethane	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
Trichloroethene	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
Trichlorofluoromethane	BDL	0.0061	mg/kg	8260B	10/08/07	1.14
1,2,3-Trichloropropane	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
1,2,4-Trimethylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
1,3,5-Trimethylbenzene	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
Vinyl chloride	BDL	0.0012	mg/kg	8260B	10/08/07	1.14
Xylenes, Total	BDL	0.0036	mg/kg	8260B	10/08/07	1.14
Surrogate Recovery						
Toluene-d8	112.		% Rec.	8260B	10/08/07	1.14
Dibromofluoromethane	123.		% Rec.	8260B	10/08/07	1.14
4-Bromofluorobenzene	94.2		% Rec.	8260B	10/08/07	1.14

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence
Sample ID : AOC 3-2
Collected By :
Collection Date : 10/03/07 15:02

ESC Sample # : L313746-17

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	95.1	0.100	%	2540G	10/05/07	1
Volatile Organics						
Acetone	0.21	0.054	mg/kg	8260B	10/08/07	1.02
Acrylonitrile	BDL	0.011	mg/kg	8260B	10/08/07	1.02
Benzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
Bromobenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
Bromodichloromethane	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
Bromoform	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
Bromomethane	BDL	0.0054	mg/kg	8260B	10/08/07	1.02
n-Butylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
sec-Butylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
tert-Butylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
Carbon tetrachloride	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
Chlorobenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
Chlorodibromomethane	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
Chloroethane	BDL	0.0054	mg/kg	8260B	10/08/07	1.02
2-Chloroethyl vinyl ether	BDL	0.054	mg/kg	8260B	10/08/07	1.02
Chloroform	BDL	0.0054	mg/kg	8260B	10/08/07	1.02
Chloromethane	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
2-Chlorotoluene	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
4-Chlorotoluene	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
1,2-Dibromo-3-Chloropropane	BDL	0.0054	mg/kg	8260B	10/08/07	1.02
1,2-Dibromoethane	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
Dibromomethane	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
1,2-Dichlorobenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
1,3-Dichlorobenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
1,4-Dichlorobenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
Dichlorodifluoromethane	BDL	0.0054	mg/kg	8260B	10/08/07	1.02
1,1-Dichloroethane	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
1,2-Dichloroethane	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
1,1-Dichloroethene	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
cis-1,2-Dichloroethene	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
trans-1,2-Dichloroethene	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
1,2-Dichloropropane	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
1,1-Dichloropropene	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
1,3-Dichloropropane	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
cis-1,3-Dichloropropene	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
trans-1,3-Dichloropropene	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
2,2-Dichloropropane	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
Di-isopropyl ether	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
Ethylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
Hexachlorobutadiene	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
Isopropylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.02

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

ESC Sample # : L313746-17

Date Received : October 04, 2007
Description : Knichel Residence

Site ID :

Sample ID : AOC 3-2

Project # :

Collected By :
Collection Date : 10/03/07 15:02

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
p-Isopropyltoluene	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
2-Butanone (MEK)	0.012	0.011	mg/kg	8260B	10/08/07	1.02
Methylene Chloride	BDL	0.0054	mg/kg	8260B	10/08/07	1.02
4-Methyl-2-pentanone (MIBK)	BDL	0.011	mg/kg	8260B	10/08/07	1.02
Methyl tert-butyl ether	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
Naphthalene	BDL	0.0054	mg/kg	8260B	10/08/07	1.02
n-Propylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
Styrene	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
1,1,1,2-Tetrachloroethane	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
1,1,2,2-Tetrachloroethane	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
Tetrachloroethene	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
Toluene	BDL	0.0054	mg/kg	8260B	10/08/07	1.02
1,2,3-Trichlorobenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
1,2,4-Trichlorobenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
1,1,1-Trichloroethane	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
1,1,2-Trichloroethane	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
Trichloroethene	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
Trichlorofluoromethane	BDL	0.0054	mg/kg	8260B	10/08/07	1.02
1,2,3-Trichloropropane	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
1,2,4-Trimethylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
1,3,5-Trimethylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
Vinyl chloride	BDL	0.0011	mg/kg	8260B	10/08/07	1.02
Xylenes, Total	BDL	0.0032	mg/kg	8260B	10/08/07	1.02
Surrogate Recovery						
Toluene-d8	113.		% Rec.	8260B	10/08/07	1.02
Dibromofluoromethane	122.		% Rec.	8260B	10/08/07	1.02
4-Bromofluorobenzene	97.1		% Rec.	8260B	10/08/07	1.02

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence
Sample ID : AOC 3-3 6 IN
Collected By :
Collection Date : 10/03/07 15:15

ESC Sample # : L313746-18

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	93.3	0.100	%	2540G	10/05/07	1
Volatile Organics						
Acetone	1.2	0.056	mg/kg	8260B	10/08/07	1.05
Acrylonitrile	BDL	0.011	mg/kg	8260B	10/08/07	1.05
Benzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
Bromobenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
Bromodichloromethane	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
Bromoform	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
Bromomethane	BDL	0.0056	mg/kg	8260B	10/08/07	1.05
n-Butylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
sec-Butylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
tert-Butylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
Carbon tetrachloride	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
Chlorobenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
Chlorodibromomethane	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
Chloroethane	BDL	0.0056	mg/kg	8260B	10/08/07	1.05
2-Chloroethyl vinyl ether	BDL	0.056	mg/kg	8260B	10/08/07	1.05
Chloroform	BDL	0.0056	mg/kg	8260B	10/08/07	1.05
Chloromethane	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
2-Chlorotoluene	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
4-Chlorotoluene	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
1,2-Dibromo-3-Chloropropane	BDL	0.0056	mg/kg	8260B	10/08/07	1.05
1,2-Dibromoethane	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
Dibromomethane	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
1,2-Dichlorobenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
1,3-Dichlorobenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
1,4-Dichlorobenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
Dichlorodifluoromethane	BDL	0.0056	mg/kg	8260B	10/08/07	1.05
1,1-Dichloroethane	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
1,2-Dichloroethane	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
1,1-Dichloroethene	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
cis-1,2-Dichloroethene	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
trans-1,2-Dichloroethene	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
1,2-Dichloropropane	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
1,1-Dichloropropene	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
1,3-Dichloropropane	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
cis-1,3-Dichloropropene	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
trans-1,3-Dichloropropene	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
2,2-Dichloropropane	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
Di-isopropyl ether	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
Ethylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
Hexachlorobutadiene	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
Isopropylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.05

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence
Sample ID : AOC 3-3 6 IN
Collected By :
Collection Date : 10/03/07 15:15

ESC Sample # : L313746-18

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
p-Isopropyltoluene	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
2-Butanone (MEK)	0.031	0.011	mg/kg	8260B	10/08/07	1.05
Methylene Chloride	BDL	0.0056	mg/kg	8260B	10/08/07	1.05
4-Methyl-2-pentanone (MIBK)	BDL	0.011	mg/kg	8260B	10/08/07	1.05
Methyl tert-butyl ether	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
Naphthalene	BDL	0.0056	mg/kg	8260B	10/08/07	1.05
n-Propylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
Styrene	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
1,1,1,2-Tetrachloroethane	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
1,1,2,2-Tetrachloroethane	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
Tetrachloroethene	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
Toluene	BDL	0.0056	mg/kg	8260B	10/08/07	1.05
1,2,3-Trichlorobenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
1,2,4-Trichlorobenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
1,1,1-Trichloroethane	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
1,1,2-Trichloroethane	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
Trichloroethene	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
Trichlorofluoromethane	BDL	0.0056	mg/kg	8260B	10/08/07	1.05
1,2,3-Trichloropropane	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
1,2,4-Trimethylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
1,3,5-Trimethylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
Vinyl chloride	BDL	0.0011	mg/kg	8260B	10/08/07	1.05
Xylenes, Total	BDL	0.0034	mg/kg	8260B	10/08/07	1.05
Surrogate Recovery						
Toluene-d8	111.		% Rec.	8260B	10/08/07	1.05
Dibromofluoromethane	120.		% Rec.	8260B	10/08/07	1.05
4-Bromofluorobenzene	97.1		% Rec.	8260B	10/08/07	1.05

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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Est. 1970

REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence
Sample ID : AOC 4 R1
Collected By :
Collection Date : 10/03/07 12:30

ESC Sample # : L313746-19

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
Acetone	BDL	50.	ug/l	8260B	10/08/07	1
Acrolein	BDL	50.	ug/l	8260B	10/08/07	1
Acrylonitrile	BDL	10.	ug/l	8260B	10/08/07	1
Benzene	BDL	1.0	ug/l	8260B	10/08/07	1
Bromobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Bromodichloromethane	BDL	1.0	ug/l	8260B	10/08/07	1
Bromoform	BDL	1.0	ug/l	8260B	10/08/07	1
Bromomethane	BDL	5.0	ug/l	8260B	10/08/07	1
n-Butylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
sec-Butylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
tert-Butylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Carbon tetrachloride	BDL	1.0	ug/l	8260B	10/08/07	1
Chlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Chlorodibromomethane	BDL	1.0	ug/l	8260B	10/08/07	1
Chloroethane	BDL	5.0	ug/l	8260B	10/08/07	1
2-Chloroethyl vinyl ether	BDL	50.	ug/l	8260B	10/08/07	1
Chloroform	BDL	5.0	ug/l	8260B	10/08/07	1
Chloromethane	BDL	2.5	ug/l	8260B	10/08/07	1
2-Chlorotoluene	BDL	1.0	ug/l	8260B	10/08/07	1
4-Chlorotoluene	BDL	1.0	ug/l	8260B	10/08/07	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	8260B	10/08/07	1
1,2-Dibromoethane	BDL	1.0	ug/l	8260B	10/08/07	1
Dibromomethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Dichlorodifluoromethane	BDL	5.0	ug/l	8260B	10/08/07	1
1,1-Dichloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,2-Dichloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,1-Dichloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
1,2-Dichloropropane	BDL	1.0	ug/l	8260B	10/08/07	1
1,1-Dichloropropene	BDL	1.0	ug/l	8260B	10/08/07	1
1,3-Dichloropropane	BDL	1.0	ug/l	8260B	10/08/07	1
cis-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	10/08/07	1
trans-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	10/08/07	1
2,2-Dichloropropane	BDL	1.0	ug/l	8260B	10/08/07	1
Di-isopropyl ether	BDL	1.0	ug/l	8260B	10/08/07	1
Ethylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Hexachlorobutadiene	BDL	1.0	ug/l	8260B	10/08/07	1
Isopropylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
p-Isopropyltoluene	BDL	1.0	ug/l	8260B	10/08/07	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit (PQL)



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Est. 1970

REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence

Sample ID : AOC 4 R1

Collected By :
Collection Date : 10/03/07 12:30

ESC Sample # : L313746-19

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2-Butanone (MEK)	BDL	10.	ug/l	8260B	10/08/07	1
Methylene Chloride	BDL	5.0	ug/l	8260B	10/08/07	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	8260B	10/08/07	1
Methyl tert-butyl ether	BDL	1.0	ug/l	8260B	10/08/07	1
Naphthalene	BDL	5.0	ug/l	8260B	10/08/07	1
n-Propylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Styrene	BDL	1.0	ug/l	8260B	10/08/07	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
Tetrachloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
Toluene	BDL	5.0	ug/l	8260B	10/08/07	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
Trichloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
Trichlorofluoromethane	BDL	5.0	ug/l	8260B	10/08/07	1
1,2,3-Trichloropropane	BDL	1.0	ug/l	8260B	10/08/07	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Vinyl chloride	BDL	1.0	ug/l	8260B	10/08/07	1
Xylenes, Total	BDL	3.0	ug/l	8260B	10/08/07	1
Surrogate Recovery						
Toluene-d8	104.		% Rec.	8260B	10/08/07	1
Dibromofluoromethane	102.		% Rec.	8260B	10/08/07	1
4-Bromofluorobenzene	102.		% Rec.	8260B	10/08/07	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence
Sample ID : AOC 4 R2
Collected By :
Collection Date : 10/03/07 12:30

ESC Sample # : L313746-20

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
Acetone	BDL	50.	ug/l	8260B	10/08/07	1
Acrolein	BDL	50.	ug/l	8260B	10/08/07	1
Acrylonitrile	BDL	10.	ug/l	8260B	10/08/07	1
Benzene	BDL	1.0	ug/l	8260B	10/08/07	1
Bromobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Bromodichloromethane	BDL	1.0	ug/l	8260B	10/08/07	1
Bromoform	BDL	1.0	ug/l	8260B	10/08/07	1
Bromomethane	BDL	5.0	ug/l	8260B	10/08/07	1
n-Butylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
sec-Butylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
tert-Butylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Carbon tetrachloride	BDL	1.0	ug/l	8260B	10/08/07	1
Chlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Chlorodibromomethane	BDL	1.0	ug/l	8260B	10/08/07	1
Chloroethane	BDL	5.0	ug/l	8260B	10/08/07	1
2-Chloroethyl vinyl ether	BDL	50.	ug/l	8260B	10/08/07	1
Chloroform	BDL	5.0	ug/l	8260B	10/08/07	1
Chloromethane	BDL	2.5	ug/l	8260B	10/08/07	1
2-Chlorotoluene	BDL	1.0	ug/l	8260B	10/08/07	1
4-Chlorotoluene	BDL	1.0	ug/l	8260B	10/08/07	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	8260B	10/08/07	1
1,2-Dibromoethane	BDL	1.0	ug/l	8260B	10/08/07	1
Dibromomethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Dichlorodifluoromethane	BDL	5.0	ug/l	8260B	10/08/07	1
1,1-Dichloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,2-Dichloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,1-Dichloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
1,2-Dichloropropane	BDL	1.0	ug/l	8260B	10/08/07	1
1,1-Dichloropropene	BDL	1.0	ug/l	8260B	10/08/07	1
1,3-Dichloropropene	BDL	1.0	ug/l	8260B	10/08/07	1
cis-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	10/08/07	1
trans-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	10/08/07	1
2,2-Dichloropropane	BDL	1.0	ug/l	8260B	10/08/07	1
Di-isopropyl ether	BDL	1.0	ug/l	8260B	10/08/07	1
Ethylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Hexachlorobutadiene	BDL	1.0	ug/l	8260B	10/08/07	1
Isopropylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
p-Isopropyltoluene	BDL	1.0	ug/l	8260B	10/08/07	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit (PQL)



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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence

Sample ID : AOC 4 R2

Collected By :
Collection Date : 10/03/07 12:30

ESC Sample # : L313746-20

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2-Butanone (MEK)	BDL	10.	ug/l	8260B	10/08/07	1
Methylene Chloride	BDL	5.0	ug/l	8260B	10/08/07	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	8260B	10/08/07	1
Methyl tert-butyl ether	BDL	1.0	ug/l	8260B	10/08/07	1
Naphthalene	BDL	5.0	ug/l	8260B	10/08/07	1
n-Propylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Styrene	BDL	1.0	ug/l	8260B	10/08/07	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
Tetrachloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
Toluene	BDL	5.0	ug/l	8260B	10/08/07	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
Trichloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
Trichlorofluoromethane	BDL	5.0	ug/l	8260B	10/08/07	1
1,2,3-Trichloropropane	BDL	1.0	ug/l	8260B	10/08/07	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Vinyl chloride	BDL	1.0	ug/l	8260B	10/08/07	1
Xylenes, Total	BDL	3.0	ug/l	8260B	10/08/07	1
Surrogate Recovery						
Toluene-d8	103.		% Rec.	8260B	10/08/07	1
Dibromofluoromethane	102.		% Rec.	8260B	10/08/07	1
4-Bromofluorobenzene	105.		% Rec.	8260B	10/08/07	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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Reported: 10/08/07 18:16 Printed: 10/08/07 18:20



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Est. 1970

REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence
Sample ID : AOC 4 L1
Collected By :
Collection Date : 10/03/07 12:30

ESC Sample # : L313746-21

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
Acetone	BDL	50.	ug/l	8260B	10/08/07	1
Acrolein	BDL	50.	ug/l	8260B	10/08/07	1
Acrylonitrile	BDL	10.	ug/l	8260B	10/08/07	1
Benzene	BDL	1.0	ug/l	8260B	10/08/07	1
Bromobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Bromodichloromethane	BDL	1.0	ug/l	8260B	10/08/07	1
Bromoform	BDL	1.0	ug/l	8260B	10/08/07	1
Bromomethane	BDL	5.0	ug/l	8260B	10/08/07	1
n-Butylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
sec-Butylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
tert-Butylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Carbon tetrachloride	BDL	1.0	ug/l	8260B	10/08/07	1
Chlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Chlorodibromomethane	BDL	1.0	ug/l	8260B	10/08/07	1
Chloroethane	BDL	5.0	ug/l	8260B	10/08/07	1
2-Chloroethyl vinyl ether	BDL	50.	ug/l	8260B	10/08/07	1
Chloroform	BDL	5.0	ug/l	8260B	10/08/07	1
Chloromethane	BDL	2.5	ug/l	8260B	10/08/07	1
2-Chlorotoluene	BDL	1.0	ug/l	8260B	10/08/07	1
4-Chlorotoluene	BDL	1.0	ug/l	8260B	10/08/07	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	8260B	10/08/07	1
1,2-Dibromoethane	BDL	1.0	ug/l	8260B	10/08/07	1
Dibromomethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Dichlorodifluoromethane	BDL	5.0	ug/l	8260B	10/08/07	1
1,1-Dichloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,2-Dichloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,1-Dichloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
1,2-Dichloropropane	BDL	1.0	ug/l	8260B	10/08/07	1
1,1-Dichloropropene	BDL	1.0	ug/l	8260B	10/08/07	1
1,3-Dichloropropane	BDL	1.0	ug/l	8260B	10/08/07	1
cis-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	10/08/07	1
trans-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	10/08/07	1
2,2-Dichloropropane	BDL	1.0	ug/l	8260B	10/08/07	1
Di-isopropyl ether	BDL	1.0	ug/l	8260B	10/08/07	1
Ethylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Hexachlorobutadiene	BDL	1.0	ug/l	8260B	10/08/07	1
Isopropylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
p-Isopropyltoluene	BDL	1.0	ug/l	8260B	10/08/07	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit (PQL)



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REPORT OF ANALYSIS

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

October 08, 2007

Date Received : October 04, 2007
Description : Knichel Residence

ESC Sample # : L313746-21

Sample ID : AOC 4 L1

Site ID :

Collected By :
Collection Date : 10/03/07 12:30

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2-Butanone (MEK)	BDL	10.	ug/l	8260B	10/08/07	1
Methylene Chloride	BDL	5.0	ug/l	8260B	10/08/07	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	8260B	10/08/07	1
Methyl tert-butyl ether	BDL	1.0	ug/l	8260B	10/08/07	1
Naphthalene	BDL	5.0	ug/l	8260B	10/08/07	1
n-Propylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Styrene	BDL	1.0	ug/l	8260B	10/08/07	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
Tetrachloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
Toluene	BDL	5.0	ug/l	8260B	10/08/07	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
Trichloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
Trichlorofluoromethane	BDL	5.0	ug/l	8260B	10/08/07	1
1,2,3-Trichloropropane	BDL	1.0	ug/l	8260B	10/08/07	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Vinyl chloride	BDL	1.0	ug/l	8260B	10/08/07	1
Xylenes, Total	BDL	3.0	ug/l	8260B	10/08/07	1
Surrogate Recovery						
Toluene-d8	105.		% Rec.	8260B	10/08/07	1
Dibromofluoromethane	102.		% Rec.	8260B	10/08/07	1
4-Bromofluorobenzene	107.		% Rec.	8260B	10/08/07	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence
Sample ID : AOC 4 L2
Collected By :
Collection Date : 10/03/07 12:30

ESC Sample # : L313746-22

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
Acetone	BDL	50.	ug/l	8260B	10/08/07	1
Acrolein	BDL	50.	ug/l	8260B	10/08/07	1
Acrylonitrile	BDL	10.	ug/l	8260B	10/08/07	1
Benzene	BDL	1.0	ug/l	8260B	10/08/07	1
Bromobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Bromodichloromethane	BDL	1.0	ug/l	8260B	10/08/07	1
Bromoform	BDL	1.0	ug/l	8260B	10/08/07	1
Bromomethane	BDL	5.0	ug/l	8260B	10/08/07	1
n-Butylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
sec-Butylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
tert-Butylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Carbon tetrachloride	BDL	1.0	ug/l	8260B	10/08/07	1
Chlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Chlorodibromomethane	BDL	1.0	ug/l	8260B	10/08/07	1
Chloroethane	BDL	5.0	ug/l	8260B	10/08/07	1
2-Chloroethyl vinyl ether	BDL	50.	ug/l	8260B	10/08/07	1
Chloroform	BDL	5.0	ug/l	8260B	10/08/07	1
Chloromethane	BDL	2.5	ug/l	8260B	10/08/07	1
2-Chlorotoluene	BDL	1.0	ug/l	8260B	10/08/07	1
4-Chlorotoluene	BDL	1.0	ug/l	8260B	10/08/07	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	8260B	10/08/07	1
1,2-Dibromoethane	BDL	1.0	ug/l	8260B	10/08/07	1
Dibromomethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Dichlorodifluoromethane	BDL	5.0	ug/l	8260B	10/08/07	1
1,1-Dichloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,2-Dichloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,1-Dichloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
1,2-Dichloropropane	BDL	1.0	ug/l	8260B	10/08/07	1
1,1-Dichloropropene	BDL	1.0	ug/l	8260B	10/08/07	1
1,3-Dichloropropane	BDL	1.0	ug/l	8260B	10/08/07	1
cis-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	10/08/07	1
trans-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	10/08/07	1
2,2-Dichloropropane	BDL	1.0	ug/l	8260B	10/08/07	1
Di-isopropyl ether	BDL	1.0	ug/l	8260B	10/08/07	1
Ethylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Hexachlorobutadiene	BDL	1.0	ug/l	8260B	10/08/07	1
Isopropylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
p-Isopropyltoluene	BDL	1.0	ug/l	8260B	10/08/07	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit (PQL)



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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence

Sample ID : AOC 4 L2

Collected By :
Collection Date : 10/03/07 12:30

ESC Sample # : L313746-22

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2-Butanone (MEK)	BDL	10.	ug/l	8260B	10/08/07	1
Methylene Chloride	BDL	5.0	ug/l	8260B	10/08/07	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	8260B	10/08/07	1
Methyl tert-butyl ether	BDL	1.0	ug/l	8260B	10/08/07	1
Naphthalene	BDL	5.0	ug/l	8260B	10/08/07	1
n-Propylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Styrene	BDL	1.0	ug/l	8260B	10/08/07	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
Tetrachloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
Toluene	BDL	5.0	ug/l	8260B	10/08/07	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
Trichloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
Trichlorofluoromethane	BDL	5.0	ug/l	8260B	10/08/07	1
1,2,3-Trichloropropane	BDL	1.0	ug/l	8260B	10/08/07	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Vinyl chloride	BDL	1.0	ug/l	8260B	10/08/07	1
Xylenes, Total	BDL	3.0	ug/l	8260B	10/08/07	1
Surrogate Recovery						
Toluene-d8	104.		% Rec.	8260B	10/08/07	1
Dibromofluoromethane	102.		% Rec.	8260B	10/08/07	1
4-Bromofluorobenzene	108.		% Rec.	8260B	10/08/07	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence
Sample ID : AOC 5-1
Collected By :
Collection Date : 10/03/07 15:34

ESC Sample # : L313746-23

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	99.4	0.100	%	2540G	10/05/07	1
Volatile Organics						
Acetone	0.18	0.050	mg/kg	8260B	10/08/07	1
Acrylonitrile	BDL	0.010	mg/kg	8260B	10/08/07	1
Benzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Bromobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Bromodichloromethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
Bromoform	BDL	0.0010	mg/kg	8260B	10/08/07	1
Bromomethane	BDL	0.0050	mg/kg	8260B	10/08/07	1
n-Butylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
sec-Butylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
tert-Butylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Carbon tetrachloride	BDL	0.0010	mg/kg	8260B	10/08/07	1
Chlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Chlorodibromomethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
Chloroethane	BDL	0.0050	mg/kg	8260B	10/08/07	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/kg	8260B	10/08/07	1
Chloroform	BDL	0.0050	mg/kg	8260B	10/08/07	1
Chloromethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
2-Chlorotoluene	BDL	0.0010	mg/kg	8260B	10/08/07	1
4-Chlorotoluene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/kg	8260B	10/08/07	1
1,2-Dibromoethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
Dibromomethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2-Dichlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,3-Dichlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,4-Dichlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Dichlorodifluoromethane	BDL	0.0050	mg/kg	8260B	10/08/07	1
1,1-Dichloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2-Dichloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1-Dichloroethene	BDL	0.0010	mg/kg	8260B	10/08/07	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/kg	8260B	10/08/07	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2-Dichloropropane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1-Dichloropropene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,3-Dichloropropane	BDL	0.0010	mg/kg	8260B	10/08/07	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/kg	8260B	10/08/07	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/kg	8260B	10/08/07	1
2,2-Dichloropropane	BDL	0.0010	mg/kg	8260B	10/08/07	1
Di-isopropyl ether	BDL	0.0010	mg/kg	8260B	10/08/07	1
Ethylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Hexachlorobutadiene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Isopropylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence

Sample ID : AOC 5-1

Collected By :
Collection Date : 10/03/07 15:34

ESC Sample # : L313746-23

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
p-Isopropyltoluene	BDL	0.0010	mg/kg	8260B	10/08/07	1
2-Butanone (MEK)	BDL	0.010	mg/kg	8260B	10/08/07	1
Methylene Chloride	BDL	0.0050	mg/kg	8260B	10/08/07	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/kg	8260B	10/08/07	1
Methyl tert-butyl ether	BDL	0.0010	mg/kg	8260B	10/08/07	1
Naphthalene	BDL	0.0050	mg/kg	8260B	10/08/07	1
n-Propylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Styrene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
Tetrachloroethene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Toluene	BDL	0.0050	mg/kg	8260B	10/08/07	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1,1-Trichloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1,2-Trichloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.0010	mg/kg	8260B	10/08/07	1
Trichloroethene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Trichlorofluoromethane	BDL	0.0050	mg/kg	8260B	10/08/07	1
1,2,3-Trichloropropane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Vinyl chloride	BDL	0.0010	mg/kg	8260B	10/08/07	1
Xylenes, Total	BDL	0.0030	mg/kg	8260B	10/08/07	1
Surrogate Recovery						
Toluene-d8	113.		% Rec.	8260B	10/08/07	1
Dibromofluoromethane	123.		% Rec.	8260B	10/08/07	1
4-Bromofluorobenzene	100.		% Rec.	8260B	10/08/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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Est. 1970

REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence

Sample ID : AOC 5-2

Collected By :
Collection Date : 10/03/07 15:35

ESC Sample # : L313746-24

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	97.9	0.100	%	2540G	10/05/07	1
Volatile Organics						
Acetone	0.091	0.051	mg/kg	8260B	10/08/07	1
Acrylonitrile	BDL	0.010	mg/kg	8260B	10/08/07	1
Benzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Bromobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Bromodichloromethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
Bromoform	BDL	0.0010	mg/kg	8260B	10/08/07	1
Bromomethane	BDL	0.0051	mg/kg	8260B	10/08/07	1
n-Butylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
sec-Butylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
tert-Butylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Carbon tetrachloride	BDL	0.0010	mg/kg	8260B	10/08/07	1
Chlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Chlorodibromomethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
Chloroethane	BDL	0.0051	mg/kg	8260B	10/08/07	1
2-Chloroethyl vinyl ether	BDL	0.051	mg/kg	8260B	10/08/07	1
Chloroform	BDL	0.0051	mg/kg	8260B	10/08/07	1
Chloromethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
2-Chlorotoluene	BDL	0.0010	mg/kg	8260B	10/08/07	1
4-Chlorotoluene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2-Dibromo-3-Chloropropane	BDL	0.0051	mg/kg	8260B	10/08/07	1
1,2-Dibromoethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
Dibromomethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2-Dichlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,3-Dichlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,4-Dichlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Dichlorodifluoromethane	BDL	0.0051	mg/kg	8260B	10/08/07	1
1,1-Dichloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2-Dichloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1-Dichloroethene	BDL	0.0010	mg/kg	8260B	10/08/07	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/kg	8260B	10/08/07	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2-Dichloropropane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1-Dichloropropene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,3-Dichloropropane	BDL	0.0010	mg/kg	8260B	10/08/07	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/kg	8260B	10/08/07	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/kg	8260B	10/08/07	1
2,2-Dichloropropane	BDL	0.0010	mg/kg	8260B	10/08/07	1
Di-isopropyl ether	BDL	0.0010	mg/kg	8260B	10/08/07	1
Ethylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Hexachlorobutadiene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Isopropylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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Est. 1970

REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

ESC Sample # : L313746-24

Date Received : October 04, 2007
Description : Knichel Residence

Site ID :

Sample ID : AOC 5-2

Project # :

Collected By :
Collection Date : 10/03/07 15:35

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
p-Isopropyltoluene	BDL	0.0010	mg/kg	8260B	10/08/07	1
2-Butanone (MEK)	BDL	0.010	mg/kg	8260B	10/08/07	1
Methylene Chloride	BDL	0.0051	mg/kg	8260B	10/08/07	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/kg	8260B	10/08/07	1
Methyl tert-butyl ether	BDL	0.0010	mg/kg	8260B	10/08/07	1
Naphthalene	BDL	0.0051	mg/kg	8260B	10/08/07	1
n-Propylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Styrene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
Tetrachloroethene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Toluene	BDL	0.0051	mg/kg	8260B	10/08/07	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1,1-Trichloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1,2-Trichloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.0010	mg/kg	8260B	10/08/07	1
Trichloroethene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Trichlorofluoromethane	BDL	0.0051	mg/kg	8260B	10/08/07	1
1,2,3-Trichloropropane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Vinyl chloride	BDL	0.0010	mg/kg	8260B	10/08/07	1
Xylenes, Total	BDL	0.0031	mg/kg	8260B	10/08/07	1
Surrogate Recovery						
Toluene-d8	103.		% Rec.	8260B	10/08/07	1
Dibromofluoromethane	105.		% Rec.	8260B	10/08/07	1
4-Bromofluorobenzene	88.3		% Rec.	8260B	10/08/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence

Sample ID : AOC 5-3

Collected By :
Collection Date : 10/03/07 15:45

ESC Sample # : L313746-25

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	95.1	0.100	%	2540G	10/05/07	1
Volatile Organics						
Acetone	0.88	0.052	mg/kg	8260B	10/08/07	1
Acrylonitrile	BDL	0.010	mg/kg	8260B	10/08/07	1
Benzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Bromobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Bromodichloromethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
Bromoform	BDL	0.0010	mg/kg	8260B	10/08/07	1
Bromomethane	BDL	0.0052	mg/kg	8260B	10/08/07	1
n-Butylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
sec-Butylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
tert-Butylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Carbon tetrachloride	BDL	0.0010	mg/kg	8260B	10/08/07	1
Chlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Chlorodibromomethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
Chloroethane	BDL	0.0052	mg/kg	8260B	10/08/07	1
2-Chloroethyl vinyl ether	BDL	0.052	mg/kg	8260B	10/08/07	1
Chloroform	BDL	0.0052	mg/kg	8260B	10/08/07	1
Chloromethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
2-Chlorotoluene	BDL	0.0010	mg/kg	8260B	10/08/07	1
4-Chlorotoluene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2-Dibromo-3-Chloropropane	BDL	0.0052	mg/kg	8260B	10/08/07	1
1,2-Dibromoethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
Dibromomethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2-Dichlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,3-Dichlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,4-Dichlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Dichlorodifluoromethane	BDL	0.0052	mg/kg	8260B	10/08/07	1
1,1-Dichloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2-Dichloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1-Dichloroethene	BDL	0.0010	mg/kg	8260B	10/08/07	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/kg	8260B	10/08/07	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2-Dichloropropane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1-Dichloropropene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,3-Dichloropropane	BDL	0.0010	mg/kg	8260B	10/08/07	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/kg	8260B	10/08/07	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/kg	8260B	10/08/07	1
2,2-Dichloropropane	BDL	0.0010	mg/kg	8260B	10/08/07	1
Di-isopropyl ether	BDL	0.0010	mg/kg	8260B	10/08/07	1
Ethylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Hexachlorobutadiene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Isopropylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

ESC Sample # : L313746-25

Date Received : October 04, 2007
Description : Knichel Residence

Site ID :

Sample ID : AOC 5-3

Project # :

Collected By :
Collection Date : 10/03/07 15:45

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
p-Isopropyltoluene	BDL	0.0010	mg/kg	8260B	10/08/07	1
2-Butanone (MEK)	BDL	0.010	mg/kg	8260B	10/08/07	1
Methylene Chloride	BDL	0.0052	mg/kg	8260B	10/08/07	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/kg	8260B	10/08/07	1
Methyl tert-butyl ether	BDL	0.0010	mg/kg	8260B	10/08/07	1
Naphthalene	BDL	0.0052	mg/kg	8260B	10/08/07	1
n-Propylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Styrene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
Tetrachloroethene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Toluene	BDL	0.0052	mg/kg	8260B	10/08/07	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1,1-Trichloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1,2-Trichloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.0010	mg/kg	8260B	10/08/07	1
Trichloroethene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Trichlorofluoromethane	BDL	0.0052	mg/kg	8260B	10/08/07	1
1,2,3-Trichloropropane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Vinyl chloride	BDL	0.0010	mg/kg	8260B	10/08/07	1
Xylenes, Total	BDL	0.0032	mg/kg	8260B	10/08/07	1
Surrogate Recovery						
Toluene-d8	105.		% Rec.	8260B	10/08/07	1
Dibromofluoromethane	107.		% Rec.	8260B	10/08/07	1
4-Bromofluorobenzene	99.7		% Rec.	8260B	10/08/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence
Sample ID : AOC 6-1
Collected By :
Collection Date : 10/03/07 15:52

ESC Sample # : L313746-26

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	95.6	0.100	%	2540G	10/05/07	1
Volatile Organics						
Acetone	0.091	0.052	mg/kg	8260B	10/08/07	1
Acrylonitrile	BDL	0.010	mg/kg	8260B	10/08/07	1
Benzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Bromobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Bromodichloromethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
Bromoform	BDL	0.0010	mg/kg	8260B	10/08/07	1
Bromomethane	BDL	0.0052	mg/kg	8260B	10/08/07	1
n-Butylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
sec-Butylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
tert-Butylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Carbon tetrachloride	BDL	0.0010	mg/kg	8260B	10/08/07	1
Chlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Chlorodibromomethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
Chloroethane	BDL	0.0052	mg/kg	8260B	10/08/07	1
2-Chloroethyl vinyl ether	BDL	0.052	mg/kg	8260B	10/08/07	1
Chloroform	BDL	0.0052	mg/kg	8260B	10/08/07	1
Chloromethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
2-Chlorotoluene	BDL	0.0010	mg/kg	8260B	10/08/07	1
4-Chlorotoluene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2-Dibromo-3-Chloropropane	BDL	0.0052	mg/kg	8260B	10/08/07	1
1,2-Dibromoethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
Dibromomethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2-Dichlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,3-Dichlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,4-Dichlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Dichlorodifluoromethane	BDL	0.0052	mg/kg	8260B	10/08/07	1
1,1-Dichloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2-Dichloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1-Dichloroethene	BDL	0.0010	mg/kg	8260B	10/08/07	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/kg	8260B	10/08/07	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2-Dichloropropane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1-Dichloropropene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,3-Dichloropropane	BDL	0.0010	mg/kg	8260B	10/08/07	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/kg	8260B	10/08/07	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/kg	8260B	10/08/07	1
2,2-Dichloropropane	BDL	0.0010	mg/kg	8260B	10/08/07	1
Di-isopropyl ether	BDL	0.0010	mg/kg	8260B	10/08/07	1
Ethylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Hexachlorobutadiene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Isopropylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence

Sample ID : AOC 6-1

Collected By :
Collection Date : 10/03/07 15:52

ESC Sample # : L313746-26

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
p-Isopropyltoluene	BDL	0.0010	mg/kg	8260B	10/08/07	1
2-Butanone (MEK)	BDL	0.010	mg/kg	8260B	10/08/07	1
Methylene Chloride	BDL	0.0052	mg/kg	8260B	10/08/07	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/kg	8260B	10/08/07	1
Methyl tert-butyl ether	BDL	0.0010	mg/kg	8260B	10/08/07	1
Naphthalene	BDL	0.0052	mg/kg	8260B	10/08/07	1
n-Propylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Styrene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
Tetrachloroethene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Toluene	BDL	0.0052	mg/kg	8260B	10/08/07	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1,1-Trichloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1,2-Trichloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.0010	mg/kg	8260B	10/08/07	1
Trichloroethene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Trichlorofluoromethane	BDL	0.0052	mg/kg	8260B	10/08/07	1
1,2,3-Trichloropropane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Vinyl chloride	BDL	0.0010	mg/kg	8260B	10/08/07	1
Xylenes, Total	BDL	0.0031	mg/kg	8260B	10/08/07	1
Surrogate Recovery						
Toluene-d8	104.		% Rec.	8260B	10/08/07	1
Dibromofluoromethane	106.		% Rec.	8260B	10/08/07	1
4-Bromofluorobenzene	99.1		% Rec.	8260B	10/08/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

October 08, 2007

Date Received : October 04, 2007
Description : Knichel Residence
Sample ID : AOC 6-2
Collected By :
Collection Date : 10/03/07 15:55

ESC Sample # : L313746-27

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	96.2	0.100	%	2540G	10/05/07	1
Volatile Organics						
Acetone	0.10	0.052	mg/kg	8260B	10/08/07	1
Acrylonitrile	BDL	0.010	mg/kg	8260B	10/08/07	1
Benzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Bromobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Bromodichloromethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
Bromoform	BDL	0.0010	mg/kg	8260B	10/08/07	1
Bromomethane	BDL	0.0052	mg/kg	8260B	10/08/07	1
n-Butylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
sec-Butylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
tert-Butylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Carbon tetrachloride	BDL	0.0010	mg/kg	8260B	10/08/07	1
Chlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Chlorodibromomethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
Chloroethane	BDL	0.0052	mg/kg	8260B	10/08/07	1
2-Chloroethyl vinyl ether	BDL	0.052	mg/kg	8260B	10/08/07	1
Chloroform	BDL	0.0052	mg/kg	8260B	10/08/07	1
Chloromethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
2-Chlorotoluene	BDL	0.0010	mg/kg	8260B	10/08/07	1
4-Chlorotoluene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2-Dibromo-3-Chloropropane	BDL	0.0052	mg/kg	8260B	10/08/07	1
1,2-Dibromoethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
Dibromomethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2-Dichlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,3-Dichlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,4-Dichlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Dichlorodifluoromethane	BDL	0.0052	mg/kg	8260B	10/08/07	1
1,1-Dichloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2-Dichloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1-Dichloroethene	BDL	0.0010	mg/kg	8260B	10/08/07	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/kg	8260B	10/08/07	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2-Dichloropropane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1-Dichloropropene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,3-Dichloropropane	BDL	0.0010	mg/kg	8260B	10/08/07	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/kg	8260B	10/08/07	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/kg	8260B	10/08/07	1
2,2-Dichloropropane	BDL	0.0010	mg/kg	8260B	10/08/07	1
Di-isopropyl ether	BDL	0.0010	mg/kg	8260B	10/08/07	1
Ethylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Hexachlorobutadiene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Isopropylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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Est. 1970

REPORT OF ANALYSIS

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

October 08, 2007

Date Received : October 04, 2007
Description : Knichel Residence
Sample ID : AOC 6-2
Collected By :
Collection Date : 10/03/07 15:55

ESC Sample # : L313746-27

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
p-Isopropyltoluene	BDL	0.0010	mg/kg	8260B	10/08/07	1
2-Butanone (MEK)	BDL	0.010	mg/kg	8260B	10/08/07	1
Methylene Chloride	BDL	0.0052	mg/kg	8260B	10/08/07	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/kg	8260B	10/08/07	1
Methyl tert-butyl ether	BDL	0.0010	mg/kg	8260B	10/08/07	1
Naphthalene	BDL	0.0052	mg/kg	8260B	10/08/07	1
n-Propylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Styrene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
Tetrachloroethene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Toluene	BDL	0.0052	mg/kg	8260B	10/08/07	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1,1-Trichloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1,2-Trichloroethane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.0010	mg/kg	8260B	10/08/07	1
Trichloroethene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Trichlorofluoromethane	BDL	0.0052	mg/kg	8260B	10/08/07	1
1,2,3-Trichloropropane	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/kg	8260B	10/08/07	1
Vinyl chloride	BDL	0.0010	mg/kg	8260B	10/08/07	1
Xylenes, Total	BDL	0.0031	mg/kg	8260B	10/08/07	1
Surrogate Recovery						
Toluene-d8	104.		% Rec.	8260B	10/08/07	1
Dibromofluoromethane	106.		% Rec.	8260B	10/08/07	1
4-Bromofluorobenzene	97.0		% Rec.	8260B	10/08/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence
Sample ID : AOC 7-1 6 IN
Collected By :
Collection Date : 10/03/07 15:15

ESC Sample # : L313746-28

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	93.8	0.100	%	2540G	10/05/07	1
Volatile Organics						
Acetone	0.37	0.053	mg/kg	8260B	10/08/07	1
Acrylonitrile	BDL	0.011	mg/kg	8260B	10/08/07	1
Benzene	BDL	0.0011	mg/kg	8260B	10/08/07	1
Bromobenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1
Bromodichloromethane	BDL	0.0011	mg/kg	8260B	10/08/07	1
Bromoform	BDL	0.0011	mg/kg	8260B	10/08/07	1
Bromomethane	BDL	0.0053	mg/kg	8260B	10/08/07	1
n-Butylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1
sec-Butylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1
tert-Butylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1
Carbon tetrachloride	BDL	0.0011	mg/kg	8260B	10/08/07	1
Chlorobenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1
Chlorodibromomethane	BDL	0.0011	mg/kg	8260B	10/08/07	1
Chloroethane	BDL	0.0053	mg/kg	8260B	10/08/07	1
2-Chloroethyl vinyl ether	BDL	0.053	mg/kg	8260B	10/08/07	1
Chloroform	BDL	0.0053	mg/kg	8260B	10/08/07	1
Chloromethane	BDL	0.0011	mg/kg	8260B	10/08/07	1
2-Chlorotoluene	BDL	0.0011	mg/kg	8260B	10/08/07	1
4-Chlorotoluene	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,2-Dibromo-3-Chloropropane	BDL	0.0053	mg/kg	8260B	10/08/07	1
1,2-Dibromoethane	BDL	0.0011	mg/kg	8260B	10/08/07	1
Dibromomethane	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,2-Dichlorobenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,3-Dichlorobenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,4-Dichlorobenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1
Dichlorodifluoromethane	BDL	0.0053	mg/kg	8260B	10/08/07	1
1,1-Dichloroethane	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,2-Dichloroethane	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,1-Dichloroethene	BDL	0.0011	mg/kg	8260B	10/08/07	1
cis-1,2-Dichloroethene	BDL	0.0011	mg/kg	8260B	10/08/07	1
trans-1,2-Dichloroethene	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,2-Dichloropropane	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,1-Dichloropropene	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,3-Dichloropropane	BDL	0.0011	mg/kg	8260B	10/08/07	1
cis-1,3-Dichloropropene	BDL	0.0011	mg/kg	8260B	10/08/07	1
trans-1,3-Dichloropropene	BDL	0.0011	mg/kg	8260B	10/08/07	1
2,2-Dichloropropane	BDL	0.0011	mg/kg	8260B	10/08/07	1
Di-isopropyl ether	BDL	0.0011	mg/kg	8260B	10/08/07	1
Ethylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1
Hexachlorobutadiene	BDL	0.0011	mg/kg	8260B	10/08/07	1
Isopropylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

October 08, 2007

Date Received : October 04, 2007
Description : Knichel Residence

ESC Sample # : L313746-28

Sample ID : AOC 7-1 6 IN

Site ID :

Collected By :
Collection Date : 10/03/07 15:15

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
p-Isopropyltoluene	BDL	0.0011	mg/kg	8260B	10/08/07	1
2-Butanone (MEK)	BDL	0.011	mg/kg	8260B	10/08/07	1
Methylene Chloride	BDL	0.0053	mg/kg	8260B	10/08/07	1
4-Methyl-2-pentanone (MIBK)	BDL	0.011	mg/kg	8260B	10/08/07	1
Methyl tert-butyl ether	BDL	0.0011	mg/kg	8260B	10/08/07	1
Naphthalene	BDL	0.0053	mg/kg	8260B	10/08/07	1
n-Propylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1
Styrene	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,1,1,2-Tetrachloroethane	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,1,2,2-Tetrachloroethane	BDL	0.0011	mg/kg	8260B	10/08/07	1
Tetrachloroethene	BDL	0.0011	mg/kg	8260B	10/08/07	1
Toluene	BDL	0.0053	mg/kg	8260B	10/08/07	1
1,2,3-Trichlorobenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,2,4-Trichlorobenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,1,1-Trichloroethane	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,1,2-Trichloroethane	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.0011	mg/kg	8260B	10/08/07	1
Trichloroethene	BDL	0.0011	mg/kg	8260B	10/08/07	1
Trichlorofluoromethane	BDL	0.0053	mg/kg	8260B	10/08/07	1
1,2,3-Trichloropropane	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,2,4-Trimethylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1
1,3,5-Trimethylbenzene	BDL	0.0011	mg/kg	8260B	10/08/07	1
Vinyl chloride	BDL	0.0011	mg/kg	8260B	10/08/07	1
Xylenes, Total	BDL	0.0032	mg/kg	8260B	10/08/07	1
Surrogate Recovery						
Toluene-d8	103.		% Rec.	8260B	10/08/07	1
Dibromofluoromethane	106.		% Rec.	8260B	10/08/07	1
4-Bromofluorobenzene	87.6		% Rec.	8260B	10/08/07	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence
Sample ID : EQUIPMENT BLANK
Collected By :
Collection Date : 10/03/07 16:00

ESC Sample # : L313746-29

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
Acetone	BDL	50.	ug/l	8260B	10/08/07	1
Acrolein	BDL	50.	ug/l	8260B	10/08/07	1
Acrylonitrile	BDL	10.	ug/l	8260B	10/08/07	1
Benzene	BDL	1.0	ug/l	8260B	10/08/07	1
Bromobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Bromodichloromethane	BDL	1.0	ug/l	8260B	10/08/07	1
Bromoform	BDL	1.0	ug/l	8260B	10/08/07	1
Bromomethane	BDL	5.0	ug/l	8260B	10/08/07	1
n-Butylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
sec-Butylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
tert-Butylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Carbon tetrachloride	BDL	1.0	ug/l	8260B	10/08/07	1
Chlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Chlorodibromomethane	BDL	1.0	ug/l	8260B	10/08/07	1
Chloroethane	BDL	5.0	ug/l	8260B	10/08/07	1
2-Chloroethyl vinyl ether	BDL	50.	ug/l	8260B	10/08/07	1
Chloroform	BDL	5.0	ug/l	8260B	10/08/07	1
Chloromethane	BDL	2.5	ug/l	8260B	10/08/07	1
2-Chlorotoluene	BDL	1.0	ug/l	8260B	10/08/07	1
4-Chlorotoluene	BDL	1.0	ug/l	8260B	10/08/07	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	8260B	10/08/07	1
1,2-Dibromoethane	BDL	1.0	ug/l	8260B	10/08/07	1
Dibromomethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Dichlorodifluoromethane	BDL	5.0	ug/l	8260B	10/08/07	1
1,1-Dichloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,2-Dichloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,1-Dichloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
1,2-Dichloropropane	BDL	1.0	ug/l	8260B	10/08/07	1
1,1-Dichloropropene	BDL	1.0	ug/l	8260B	10/08/07	1
1,3-Dichloropropene	BDL	1.0	ug/l	8260B	10/08/07	1
cis-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	10/08/07	1
trans-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	10/08/07	1
2,2-Dichloropropane	BDL	1.0	ug/l	8260B	10/08/07	1
Di-isopropyl ether	BDL	1.0	ug/l	8260B	10/08/07	1
Ethylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Hexachlorobutadiene	BDL	1.0	ug/l	8260B	10/08/07	1
Isopropylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
p-Isopropyltoluene	BDL	1.0	ug/l	8260B	10/08/07	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)



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REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence

Sample ID : EQUIPMENT BLANK

Collected By :
Collection Date : 10/03/07 16:00

ESC Sample # : L313746-29

Site ID :

Project # :

Parameter	Result	Det. Limit	Unit's	Method	Date	Dil.
2-Butanone (MEK)	BDL	10.	ug/l	8260B	10/08/07	1
Methylene Chloride	BDL	5.0	ug/l	8260B	10/08/07	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	8260B	10/08/07	1
Methyl tert-butyl ether	BDL	1.0	ug/l	8260B	10/08/07	1
Naphthalene	BDL	5.0	ug/l	8260B	10/08/07	1
n-Propylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Styrene	BDL	1.0	ug/l	8260B	10/08/07	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
Tetrachloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
Toluene	BDL	5.0	ug/l	8260B	10/08/07	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
Trichloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
Trichlorofluoromethane	BDL	5.0	ug/l	8260B	10/08/07	1
1,2,3-Trichloropropane	BDL	1.0	ug/l	8260B	10/08/07	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Vinyl chloride	BDL	1.0	ug/l	8260B	10/08/07	1
Xylenes, Total	BDL	3.0	ug/l	8260B	10/08/07	1
Surrogate Recovery						
Toluene-d8	103.		% Rec.	8260B	10/08/07	1
Dibromofluoromethane	103.		% Rec.	8260B	10/08/07	1
4-Bromofluorobenzene	105.		% Rec.	8260B	10/08/07	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Est. 1970

REPORT OF ANALYSIS

October 08, 2007

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

Date Received : October 04, 2007
Description : Knichel Residence

Sample ID : TRIPBLANK

Collected By :
Collection Date : 10/03/07 00:00

ESC Sample # : L313746-30

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
Acetone	BDL	50.	ug/l	8260B	10/08/07	1
Acrolein	BDL	50.	ug/l	8260B	10/08/07	1
Acrylonitrile	BDL	10.	ug/l	8260B	10/08/07	1
Benzene	BDL	1.0	ug/l	8260B	10/08/07	1
Bromobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Bromodichloromethane	BDL	1.0	ug/l	8260B	10/08/07	1
Bromoform	BDL	1.0	ug/l	8260B	10/08/07	1
Bromomethane	BDL	5.0	ug/l	8260B	10/08/07	1
n-Butylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
sec-Butylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
tert-Butylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Carbon tetrachloride	BDL	1.0	ug/l	8260B	10/08/07	1
Chlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Chlorodibromomethane	BDL	1.0	ug/l	8260B	10/08/07	1
Chloroethane	BDL	5.0	ug/l	8260B	10/08/07	1
2-Chloroethyl vinyl ether	BDL	50.	ug/l	8260B	10/08/07	1
Chloroform	BDL	5.0	ug/l	8260B	10/08/07	1
Chloromethane	BDL	2.5	ug/l	8260B	10/08/07	1
2-Chlorotoluene	BDL	1.0	ug/l	8260B	10/08/07	1
4-Chlorotoluene	BDL	1.0	ug/l	8260B	10/08/07	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	8260B	10/08/07	1
1,2-Dibromoethane	BDL	1.0	ug/l	8260B	10/08/07	1
Dibromomethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Dichlorodifluoromethane	BDL	5.0	ug/l	8260B	10/08/07	1
1,1-Dichloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,2-Dichloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,1-Dichloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
1,2-Dichloropropane	BDL	1.0	ug/l	8260B	10/08/07	1
1,1-Dichloropropene	BDL	1.0	ug/l	8260B	10/08/07	1
1,3-Dichloropropane	BDL	1.0	ug/l	8260B	10/08/07	1
cis-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	10/08/07	1
trans-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	10/08/07	1
2,2-Dichloropropane	BDL	1.0	ug/l	8260B	10/08/07	1
Di-isopropyl ether	BDL	1.0	ug/l	8260B	10/08/07	1
Ethylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Hexachlorobutadiene	BDL	1.0	ug/l	8260B	10/08/07	1
Isopropylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
p-Isopropyltoluene	BDL	1.0	ug/l	8260B	10/08/07	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)



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REPORT OF ANALYSIS

Mr. Atef Takla
ECS Carolinas - Raleigh, NC
9001 Glenwood Ave
Raleigh, NC 27617-7505

October 08, 2007

Date Received : October 04, 2007
Description : Knichel Residence

ESC Sample # : L313746-30

Sample ID : TRIPBLANK

Site ID :

Collected By :
Collection Date : 10/03/07 00:00

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2-Butanone (MEK)	BDL	10.	ug/l	8260B	10/08/07	1
Methylene Chloride	BDL	5.0	ug/l	8260B	10/08/07	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	8260B	10/08/07	1
Methyl tert-butyl ether	BDL	1.0	ug/l	8260B	10/08/07	1
Naphthalene	BDL	5.0	ug/l	8260B	10/08/07	1
n-Propylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Styrene	BDL	1.0	ug/l	8260B	10/08/07	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
Tetrachloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
Toluene	BDL	5.0	ug/l	8260B	10/08/07	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	8260B	10/08/07	1
Trichloroethene	BDL	1.0	ug/l	8260B	10/08/07	1
Trichlorofluoromethane	BDL	5.0	ug/l	8260B	10/08/07	1
1,2,3-Trichloropropane	BDL	1.0	ug/l	8260B	10/08/07	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	8260B	10/08/07	1
Vinyl chloride	BDL	1.0	ug/l	8260B	10/08/07	1
Xylenes, Total	BDL	3.0	ug/l	8260B	10/08/07	1
Surrogate Recovery						
Toluene-d8	105.		% Rec.	8260B	10/08/07	1
Dibromofluoromethane	102.		% Rec.	8260B	10/08/07	1
4-Bromofluorobenzene	104.		% Rec.	8260B	10/08/07	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Attachment A
List of Analytes with QC Qualifiers

Sample #	Analyte	Qualifier
L313746-01	Bromomethane	J4
	Di-isopropyl ether	J4J3
	Trichlorofluoromethane	J4
L313746-02	2-Chloroethyl vinyl ether	J4J3
L313746-03	2-Chloroethyl vinyl ether	J4J3
L313746-04	Acetone	J
	2-Chloroethyl vinyl ether	J4J3
L313746-05	Dichlorodifluoromethane	J4
L313746-06	2-Chloroethyl vinyl ether	J4J3
L313746-07	2-Chloroethyl vinyl ether	J4J3
L313746-08	2-Chloroethyl vinyl ether	J4J3
L313746-09	2-Chloroethyl vinyl ether	J4J3
L313746-10	Dichlorodifluoromethane	J4
L313746-11	Bromomethane	J4
	Di-isopropyl ether	J4J3
	Trichlorofluoromethane	J4
L313746-12	Dichlorodifluoromethane	J4
L313746-13	Bromomethane	J4
	Di-isopropyl ether	J4J3
	Trichlorofluoromethane	J4
L313746-14	Bromomethane	J4
	Di-isopropyl ether	J4J3
	Trichlorofluoromethane	J4
L313746-15	Bromomethane	J4
	Di-isopropyl ether	J4J3
	Trichlorofluoromethane	J4
L313746-16	Bromomethane	J4
	Di-isopropyl ether	J4J3
	Trichlorofluoromethane	J4
L313746-17	Bromomethane	J4
	Di-isopropyl ether	J4J3
	Trichlorofluoromethane	J4
L313746-18	Acetone	E
	Bromomethane	J4
	Di-isopropyl ether	J4J3
	Trichlorofluoromethane	J4
L313746-19	Naphthalene	J3
	1,2,3-Trichlorobenzene	J4J3
	1,2,4-Trichlorobenzene	J3
L313746-20	Naphthalene	J3
	1,2,3-Trichlorobenzene	J4J3
	1,2,4-Trichlorobenzene	J3
L313746-21	Naphthalene	J3
	1,2,3-Trichlorobenzene	J4J3
	1,2,4-Trichlorobenzene	J3
L313746-22	Naphthalene	J3
	1,2,3-Trichlorobenzene	J4J3
	1,2,4-Trichlorobenzene	J3
L313746-23	Bromomethane	J4
	Di-isopropyl ether	J4J3
	Trichlorofluoromethane	J4
L313746-24	2-Chloroethyl vinyl ether	J4J3
L313746-25	Dichlorodifluoromethane	J4
L313746-26	Dichlorodifluoromethane	J4
L313746-27	Dichlorodifluoromethane	J4
L313746-28	Dichlorodifluoromethane	J4
L313746-29	Naphthalene	J3
	1,2,3-Trichlorobenzene	J4J3
	1,2,4-Trichlorobenzene	J3
L313746-30	Naphthalene	J3
	1,2,3-Trichlorobenzene	J4J3
	1,2,4-Trichlorobenzene	J3

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
E	GTL (EPA) - Greater than upper calibration limit: Actual value is known to be greater than the upper calibration range.
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

Control Limits				(AQ)	(SS)
2-Fluorophenol	31-119	Nitrobenzene-d5	43-118	Dibromfluoromethane	68-128 64-125
Phenol-d5	12-134	2-Fluorobiphenyl	45-128	Toluene-d8	76-115 69-118
2,4,6-Tribromophenol	51-141	Terphenyl-d14	43-137	4-Bromofluorobenzene	79-127 61-134

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

TSR Signing Reports: 064
RX - Priority Rush

[illegible]



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ECS Carolinas - Raleigh, NC
Mr. Atef Takla
9001 Glenwood Ave

Quality Assurance Report Level II

Raleigh, NC 27617-7505

L313746

October 08, 2007

Analyte	Result	Laboratory Blank		Date Analyzed	Batch
		Units			
Total Solids	< .1	%		10/05/07 08:19	WG323933
Total Solids	< .1	%		10/05/07 08:23	WG323934
Total Solids	< .1	%		10/05/07 08:27	WG323935
1,1,1,2-Tetrachloroethane	< .001	mg/kg		10/07/07 17:16	WG324363
1,1,1-Trichloroethane	< .001	mg/kg		10/07/07 17:16	WG324363
1,1,2,2-Tetrachloroethane	< .001	mg/kg		10/07/07 17:16	WG324363
1,1,2-Trichloroethane	< .001	mg/kg		10/07/07 17:16	WG324363
1,1,2-Trichloro-1,2,2-trifluoroethane	< .001	mg/kg		10/07/07 17:16	WG324363
1,1-Dichloroethane	< .001	mg/kg		10/07/07 17:16	WG324363
1,1-Dichloroethene	< .001	mg/kg		10/07/07 17:16	WG324363
1,1-Dichloropropene	< .001	mg/kg		10/07/07 17:16	WG324363
1,2,3-Trichlorobenzene	< .001	mg/kg		10/07/07 17:16	WG324363
1,2,3-Trichloropropane	< .001	mg/kg		10/07/07 17:16	WG324363
1,2,4-Trichlorobenzene	< .001	mg/kg		10/07/07 17:16	WG324363
1,2,4-Trimethylbenzene	< .001	mg/kg		10/07/07 17:16	WG324363
1,2-Dibromo-3-Chloropropane	< .005	mg/kg		10/07/07 17:16	WG324363
1,2-Dibromoethane	< .001	mg/kg		10/07/07 17:16	WG324363
1,2-Dichlorobenzene	< .001	mg/kg		10/07/07 17:16	WG324363
1,2-Dichloroethane	< .001	mg/kg		10/07/07 17:16	WG324363
1,2-Dichloropropane	< .001	mg/kg		10/07/07 17:16	WG324363
1,3,5-Trimethylbenzene	< .001	mg/kg		10/07/07 17:16	WG324363
1,3-Dichlorobenzene	< .001	mg/kg		10/07/07 17:16	WG324363
1,3-Dichloropropane	< .001	mg/kg		10/07/07 17:16	WG324363
1,4-Dichlorobenzene	< .001	mg/kg		10/07/07 17:16	WG324363
2,2-Dichloropropane	< .001	mg/kg		10/07/07 17:16	WG324363
2-Butanone (MEK)	< .01	mg/kg		10/07/07 17:16	WG324363
2-Chloroethyl vinyl ether	< .001	mg/kg		10/07/07 17:16	WG324363
2-Chlorotoluene	< .001	mg/kg		10/07/07 17:16	WG324363
4-Chlorotoluene	< .001	mg/kg		10/07/07 17:16	WG324363
4-Methyl-2-pentanone (MIBK)	< .01	mg/kg		10/07/07 17:16	WG324363
Acetone	< .05	mg/kg		10/07/07 17:16	WG324363
Acrylonitrile	< .01	mg/kg		10/07/07 17:16	WG324363
Benzene	< .001	mg/kg		10/07/07 17:16	WG324363
Bromobenzene	< .001	mg/kg		10/07/07 17:16	WG324363
Bromodichloromethane	< .001	mg/kg		10/07/07 17:16	WG324363
Bromoform	< .001	mg/kg		10/07/07 17:16	WG324363
Bromomethane	< .005	mg/kg		10/07/07 17:16	WG324363
Carbon tetrachloride	< .001	mg/kg		10/07/07 17:16	WG324363
Chlorobenzene	< .001	mg/kg		10/07/07 17:16	WG324363
Chlorodibromomethane	< .001	mg/kg		10/07/07 17:16	WG324363
Chloroethane	< .005	mg/kg		10/07/07 17:16	WG324363
Chloroform	< .005	mg/kg		10/07/07 17:16	WG324363
Chloromethane	< .001	mg/kg		10/07/07 17:16	WG324363
cis-1,2-Dichloroethene	< .001	mg/kg		10/07/07 17:16	WG324363
cis-1,3-Dichloropropene	< .001	mg/kg		10/07/07 17:16	WG324363
Di-isopropyl ether	< .001	mg/kg		10/07/07 17:16	WG324363
Dibromomethane	< .001	mg/kg		10/07/07 17:16	WG324363
Dichlorodifluoromethane	< .005	mg/kg		10/07/07 17:16	WG324363
Ethylbenzene	< .001	mg/kg		10/07/07 17:16	WG324363
Hexachlorobutadiene	< .001	mg/kg		10/07/07 17:16	WG324363
Isopropylbenzene	< .001	mg/kg		10/07/07 17:16	WG324363
Methyl tert-butyl ether	< .001	mg/kg		10/07/07 17:16	WG324363
Methylene Chloride	< .005	mg/kg		10/07/07 17:16	WG324363
n-Butylbenzene	< .001	mg/kg		10/07/07 17:16	WG324363
n-Propylbenzene	< .001	mg/kg		10/07/07 17:16	WG324363
Naphthalene	< .005	mg/kg		10/07/07 17:16	WG324363
p-Isopropyltoluene	< .001	mg/kg		10/07/07 17:16	WG324363



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Mr. Atef Takla
9001 Glenwood Ave

Quality Assurance Report Level II

Raleigh, NC 27617-7505

L313746

October 08, 2007

sec-Butylbenzene < .001 mg/kg 10/07/07 17:16 WG324363

Analyte	Result	Units	Date Analyzed	Batch
Laboratory Blank				
Styrene	< .001	mg/kg	10/07/07 17:16	WG324363
tert-Butylbenzene	< .001	mg/kg	10/07/07 17:16	WG324363
Tetrachloroethene	< .001	mg/kg	10/07/07 17:16	WG324363
Toluene	< .005	mg/kg	10/07/07 17:16	WG324363
trans-1,2-Dichloroethene	< .001	mg/kg	10/07/07 17:16	WG324363
trans-1,3-Dichloropropene	< .001	mg/kg	10/07/07 17:16	WG324363
Trichloroethene	< .001	mg/kg	10/07/07 17:16	WG324363
Trichlorofluoromethane	< .005	mg/kg	10/07/07 17:16	WG324363
Vinyl chloride	< .001	mg/kg	10/07/07 17:16	WG324363
Xylenes, Total	< .003	mg/kg	10/07/07 17:16	WG324363
1,1,1,2-Tetrachloroethane	< .001	mg/kg	10/08/07 04:50	WG324372
1,1,1-Trichloroethane	< .001	mg/kg	10/08/07 04:50	WG324372
1,1,2,2-Tetrachloroethane	< .001	mg/kg	10/08/07 04:50	WG324372
1,1,2-Trichloroethane	< .001	mg/kg	10/08/07 04:50	WG324372
1,1,2-Trichloro-1,2,2-trifluoroethane	< .001	mg/kg	10/08/07 04:50	WG324372
1,1-Dichloroethane	< .001	mg/kg	10/08/07 04:50	WG324372
1,1-Dichloroethene	< .001	mg/kg	10/08/07 04:50	WG324372
1,1-Dichloropropene	< .001	mg/kg	10/08/07 04:50	WG324372
1,2,3-Trichlorobenzene	< .001	mg/kg	10/08/07 04:50	WG324372
1,2,3-Trichloropropane	< .001	mg/kg	10/08/07 04:50	WG324372
1,2,4-Trichlorobenzene	< .001	mg/kg	10/08/07 04:50	WG324372
1,2,4-Trimethylbenzene	< .001	mg/kg	10/08/07 04:50	WG324372
1,2-Dibromo-3-Chloropropane	< .005	mg/kg	10/08/07 04:50	WG324372
1,2-Dibromoethane	< .001	mg/kg	10/08/07 04:50	WG324372
1,2-Dichlorobenzene	< .001	mg/kg	10/08/07 04:50	WG324372
1,2-Dichloroethane	< .001	mg/kg	10/08/07 04:50	WG324372
1,2-Dichloropropane	< .001	mg/kg	10/08/07 04:50	WG324372
1,3,5-Trimethylbenzene	< .001	mg/kg	10/08/07 04:50	WG324372
1,3-Dichlorobenzene	< .001	mg/kg	10/08/07 04:50	WG324372
1,3-Dichloropropane	< .001	mg/kg	10/08/07 04:50	WG324372
1,4-Dichlorobenzene	< .001	mg/kg	10/08/07 04:50	WG324372
2,2-Dichloropropane	< .001	mg/kg	10/08/07 04:50	WG324372
2-Butanone (MEK)	< .01	mg/kg	10/08/07 04:50	WG324372
2-Chloroethyl vinyl ether	< .001	mg/kg	10/08/07 04:50	WG324372
2-Chlorotoluene	< .001	mg/kg	10/08/07 04:50	WG324372
4-Chlorotoluene	< .001	mg/kg	10/08/07 04:50	WG324372
4-Methyl-2-pentanone (MIBK)	< .01	mg/kg	10/08/07 04:50	WG324372
Acetone	< .05	mg/kg	10/08/07 04:50	WG324372
Acrylonitrile	< .01	mg/kg	10/08/07 04:50	WG324372
Benzene	< .001	mg/kg	10/08/07 04:50	WG324372
Bromobenzene	< .001	mg/kg	10/08/07 04:50	WG324372
Bromodichloromethane	< .001	mg/kg	10/08/07 04:50	WG324372
Bromoform	< .001	mg/kg	10/08/07 04:50	WG324372
Bromomethane	< .005	mg/kg	10/08/07 04:50	WG324372
Carbon tetrachloride	< .001	mg/kg	10/08/07 04:50	WG324372
Chlorobenzene	< .001	mg/kg	10/08/07 04:50	WG324372
Chlorodibromomethane	< .001	mg/kg	10/08/07 04:50	WG324372
Chloroethane	< .005	mg/kg	10/08/07 04:50	WG324372
Chloroform	< .005	mg/kg	10/08/07 04:50	WG324372
Chloromethane	< .001	mg/kg	10/08/07 04:50	WG324372
cis-1,2-Dichloroethene	< .001	mg/kg	10/08/07 04:50	WG324372
cis-1,3-Dichloropropene	< .001	mg/kg	10/08/07 04:50	WG324372
Di-isopropyl ether	< .001	mg/kg	10/08/07 04:50	WG324372
Dibromomethane	< .001	mg/kg	10/08/07 04:50	WG324372
Dichlorodifluoromethane	< .005	mg/kg	10/08/07 04:50	WG324372
Ethylbenzene	< .001	mg/kg	10/08/07 04:50	WG324372
Hexachlorobutadiene	< .001	mg/kg	10/08/07 04:50	WG324372
Isopropylbenzene	< .001	mg/kg	10/08/07 04:50	WG324372



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Quality Assurance Report Level II

Raleigh, NC 27617-7505

L313746

October 08, 2007

Methyl tert-butyl ether < .001 mg/kg 10/08/07 04:50 WG324372

Analyte	Result	Units	Date Analyzed	Batch
Laboratory Blank				
Methylene Chloride	< .005	mg/kg	10/08/07 04:50	WG324372
n-Butylbenzene	< .001	mg/kg	10/08/07 04:50	WG324372
n-Propylbenzene	< .001	mg/kg	10/08/07 04:50	WG324372
Naphthalene	< .005	mg/kg	10/08/07 04:50	WG324372
p-Isopropyltoluene	< .001	mg/kg	10/08/07 04:50	WG324372
sec-Butylbenzene	< .001	mg/kg	10/08/07 04:50	WG324372
Styrene	< .001	mg/kg	10/08/07 04:50	WG324372
tert-Butylbenzene	< .001	mg/kg	10/08/07 04:50	WG324372
Tetrachloroethene	< .001	mg/kg	10/08/07 04:50	WG324372
Toluene	< .005	mg/kg	10/08/07 04:50	WG324372
trans-1,2-Dichloroethene	< .001	mg/kg	10/08/07 04:50	WG324372
trans-1,3-Dichloropropene	< .001	mg/kg	10/08/07 04:50	WG324372
Trichloroethene	< .001	mg/kg	10/08/07 04:50	WG324372
Trichlorofluoromethane	< .005	mg/kg	10/08/07 04:50	WG324372
Vinyl chloride	< .001	mg/kg	10/08/07 04:50	WG324372
Xylenes, Total	< .003	mg/kg	10/08/07 04:50	WG324372
1,1,1,2-Tetrachloroethane	< .001	mg/l	10/08/07 07:00	WG324375
1,1,1-Trichloroethane	< .001	mg/l	10/08/07 07:00	WG324375
1,1,2,2-Tetrachloroethane	< .001	mg/l	10/08/07 07:00	WG324375
1,1,2-Trichloroethane	< .001	mg/l	10/08/07 07:00	WG324375
1,1-Dichloroethane	< .001	mg/l	10/08/07 07:00	WG324375
1,1-Dichloroethene	< .001	mg/l	10/08/07 07:00	WG324375
1,1-Dichloropropene	< .001	mg/l	10/08/07 07:00	WG324375
1,2,3-Trichlorobenzene	< .001	mg/l	10/08/07 07:00	WG324375
1,2,3-Trichloropropane	< .001	mg/l	10/08/07 07:00	WG324375
1,2,4-Trichlorobenzene	< .001	mg/l	10/08/07 07:00	WG324375
1,2,4-Trimethylbenzene	< .001	mg/l	10/08/07 07:00	WG324375
1,2-Dibromo-3-Chloropropane	< .005	mg/l	10/08/07 07:00	WG324375
1,2-Dibromoethane	< .001	mg/l	10/08/07 07:00	WG324375
1,2-Dichlorobenzene	< .001	mg/l	10/08/07 07:00	WG324375
1,2-Dichloroethane	< .001	mg/l	10/08/07 07:00	WG324375
1,2-Dichloropropane	< .001	mg/l	10/08/07 07:00	WG324375
1,3,5-Trimethylbenzene	< .001	mg/l	10/08/07 07:00	WG324375
1,3-Dichlorobenzene	< .001	mg/l	10/08/07 07:00	WG324375
1,3-Dichloropropane	< .001	mg/l	10/08/07 07:00	WG324375
1,4-Dichlorobenzene	< .001	mg/l	10/08/07 07:00	WG324375
2,2-Dichloropropane	< .001	mg/l	10/08/07 07:00	WG324375
2-Butanone (MEK)	< .01	mg/l	10/08/07 07:00	WG324375
2-Chloroethyl vinyl ether	< .05	mg/l	10/08/07 07:00	WG324375
2-Chlorotoluene	< .001	mg/l	10/08/07 07:00	WG324375
4-Chlorotoluene	< .001	mg/l	10/08/07 07:00	WG324375
4-Methyl-2-pentanone (MIBK)	< .01	mg/l	10/08/07 07:00	WG324375
Acetone	< .05	mg/l	10/08/07 07:00	WG324375
Acrolein	< .05	mg/l	10/08/07 07:00	WG324375
Acrylonitrile	< .01	mg/l	10/08/07 07:00	WG324375
Benzene	< .001	mg/l	10/08/07 07:00	WG324375
Bromobenzene	< .001	mg/l	10/08/07 07:00	WG324375
Bromodichloromethane	< .001	mg/l	10/08/07 07:00	WG324375
Bromoform	< .001	mg/l	10/08/07 07:00	WG324375
Bromomethane	< .005	mg/l	10/08/07 07:00	WG324375
Carbon tetrachloride	< .001	mg/l	10/08/07 07:00	WG324375
Chlorobenzene	< .001	mg/l	10/08/07 07:00	WG324375
Chlorodibromomethane	< .001	mg/l	10/08/07 07:00	WG324375
Chloroethane	< .001	mg/l	10/08/07 07:00	WG324375
Chloroform	< .005	mg/l	10/08/07 07:00	WG324375
Chloromethane	< .0025	mg/l	10/08/07 07:00	WG324375
cis-1,2-Dichloroethene	< .001	mg/l	10/08/07 07:00	WG324375
cis-1,3-Dichloropropene	< .001	mg/l	10/08/07 07:00	WG324375



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L313746

October 08, 2007

Di-isopropyl ether < .001 mg/l 10/08/07 07:00 WG324375

Analyte	Result	Units	Date Analyzed	Batch
Laboratory Blank				
Dibromomethane	< .001	mg/l	10/08/07 07:00	WG324375
Dichlorodifluoromethane	< .005	mg/l	10/08/07 07:00	WG324375
Ethylbenzene	< .001	mg/l	10/08/07 07:00	WG324375
Hexachlorobutadiene	< .001	mg/l	10/08/07 07:00	WG324375
Isopropylbenzene	< .001	mg/l	10/08/07 07:00	WG324375
Methyl tert-butyl ether	< .001	mg/l	10/08/07 07:00	WG324375
Methylene Chloride	< .005	mg/l	10/08/07 07:00	WG324375
n-Butylbenzene	< .001	mg/l	10/08/07 07:00	WG324375
n-Propylbenzene	< .001	mg/l	10/08/07 07:00	WG324375
Naphthalene	< .005	mg/l	10/08/07 07:00	WG324375
p-Isopropyltoluene	< .001	mg/l	10/08/07 07:00	WG324375
sec-Butylbenzene	< .001	mg/l	10/08/07 07:00	WG324375
Styrene	< .001	mg/l	10/08/07 07:00	WG324375
tert-Butylbenzene	< .001	mg/l	10/08/07 07:00	WG324375
Tetrachloroethene	< .001	mg/l	10/08/07 07:00	WG324375
Toluene	< .005	mg/l	10/08/07 07:00	WG324375
trans-1,2-Dichloroethene	< .001	mg/l	10/08/07 07:00	WG324375
trans-1,3-Dichloropropene	< .001	mg/l	10/08/07 07:00	WG324375
Trichloroethene	< .001	mg/l	10/08/07 07:00	WG324375
Trichlorofluoromethane	< .005	mg/l	10/08/07 07:00	WG324375
Vinyl chloride	< .001	mg/l	10/08/07 07:00	WG324375
Xylenes, Total	< .003	mg/l	10/08/07 07:00	WG324375
1,1,1,2-Tetrachloroethane	< .001	mg/kg	10/08/07 13:12	WG324468
1,1,1-Trichloroethane	< .001	mg/kg	10/08/07 13:12	WG324468
1,1,2,2-Tetrachloroethane	< .001	mg/kg	10/08/07 13:12	WG324468
1,1,2-Trichloroethane	< .001	mg/kg	10/08/07 13:12	WG324468
1,1,2-Trichloro-1,2,2-trifluoroethane	< .001	mg/kg	10/08/07 13:12	WG324468
1,1-Dichloroethane	< .001	mg/kg	10/08/07 13:12	WG324468
1,1-Dichloroethene	< .001	mg/kg	10/08/07 13:12	WG324468
1,1-Dichloropropene	< .001	mg/kg	10/08/07 13:12	WG324468
1,2,3-Trichlorobenzene	< .001	mg/kg	10/08/07 13:12	WG324468
1,2,3-Trichloropropane	< .001	mg/kg	10/08/07 13:12	WG324468
1,2,4-Trichlorobenzene	< .001	mg/kg	10/08/07 13:12	WG324468
1,2,4-Trimethylbenzene	< .001	mg/kg	10/08/07 13:12	WG324468
1,2-Dibromo-3-Chloropropane	< .005	mg/kg	10/08/07 13:12	WG324468
1,2-Dibromoethane	< .001	mg/kg	10/08/07 13:12	WG324468
1,2-Dichlorobenzene	< .001	mg/kg	10/08/07 13:12	WG324468
1,2-Dichloroethane	< .001	mg/kg	10/08/07 13:12	WG324468
1,2-Dichloropropane	< .001	mg/kg	10/08/07 13:12	WG324468
1,3,5-Trimethylbenzene	< .001	mg/kg	10/08/07 13:12	WG324468
1,3-Dichlorobenzene	< .001	mg/kg	10/08/07 13:12	WG324468
1,3-Dichloropropane	< .001	mg/kg	10/08/07 13:12	WG324468
1,4-Dichlorobenzene	< .001	mg/kg	10/08/07 13:12	WG324468
2,2-Dichloropropane	< .001	mg/kg	10/08/07 13:12	WG324468
2-Butanone (MEK)	< .01	mg/kg	10/08/07 13:12	WG324468
2-Chloroethyl vinyl ether	< .001	mg/kg	10/08/07 13:12	WG324468
2-Chlorotoluene	< .001	mg/kg	10/08/07 13:12	WG324468
4-Chlorotoluene	< .001	mg/kg	10/08/07 13:12	WG324468
4-Methyl-2-pentanone (MIBK)	< .01	mg/kg	10/08/07 13:12	WG324468
Acetone	< .05	mg/kg	10/08/07 13:12	WG324468
Acrylonitrile	< .01	mg/kg	10/08/07 13:12	WG324468
Benzene	< .001	mg/kg	10/08/07 13:12	WG324468
Bromobenzene	< .001	mg/kg	10/08/07 13:12	WG324468
Bromodichloromethane	< .001	mg/kg	10/08/07 13:12	WG324468
Bromoform	< .001	mg/kg	10/08/07 13:12	WG324468
Bromomethane	< .005	mg/kg	10/08/07 13:12	WG324468
Carbon tetrachloride	< .001	mg/kg	10/08/07 13:12	WG324468
Chlorobenzene	< .001	mg/kg	10/08/07 13:12	WG324468



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Raleigh, NC 27617-7505

L313746

October 08, 2007

Chlorodibromomethane	< .001	mg/kg	10/08/07 13:12	WG324468
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Analyte	Result	Laboratory Blank		
		Units	Date Analyzed	Batch
Chloroethane	< .005	mg/kg	10/08/07 13:12	WG324468
Chloroform	< .005	mg/kg	10/08/07 13:12	WG324468
Chloromethane	< .001	mg/kg	10/08/07 13:12	WG324468
cis-1,2-Dichloroethene	< .001	mg/kg	10/08/07 13:12	WG324468
cis-1,3-Dichloropropene	< .001	mg/kg	10/08/07 13:12	WG324468
Di-isopropyl ether	< .001	mg/kg	10/08/07 13:12	WG324468
Dibromomethane	< .001	mg/kg	10/08/07 13:12	WG324468
Dichlorodifluoromethane	< .005	mg/kg	10/08/07 13:12	WG324468
Ethylbenzene	< .001	mg/kg	10/08/07 13:12	WG324468
Hexachlorobutadiene	< .001	mg/kg	10/08/07 13:12	WG324468
Isopropylbenzene	< .001	mg/kg	10/08/07 13:12	WG324468
Methyl tert-butyl ether	< .001	mg/kg	10/08/07 13:12	WG324468
Methylene Chloride	< .005	mg/kg	10/08/07 13:12	WG324468
n-Butylbenzene	< .001	mg/kg	10/08/07 13:12	WG324468
n-Propylbenzene	< .001	mg/kg	10/08/07 13:12	WG324468
Naphthalene	< .005	mg/kg	10/08/07 13:12	WG324468
p-Isopropyltoluene	< .001	mg/kg	10/08/07 13:12	WG324468
sec-Butylbenzene	< .001	mg/kg	10/08/07 13:12	WG324468
Styrene	< .001	mg/kg	10/08/07 13:12	WG324468
tert-Butylbenzene	< .001	mg/kg	10/08/07 13:12	WG324468
Tetrachloroethene	< .001	mg/kg	10/08/07 13:12	WG324468
Toluene	< .005	mg/kg	10/08/07 13:12	WG324468
trans-1,2-Dichloroethene	< .001	mg/kg	10/08/07 13:12	WG324468
trans-1,3-Dichloropropene	< .001	mg/kg	10/08/07 13:12	WG324468
Trichloroethene	< .001	mg/kg	10/08/07 13:12	WG324468
Trichlorofluoromethane	< .005	mg/kg	10/08/07 13:12	WG324468
Vinyl chloride	< .001	mg/kg	10/08/07 13:12	WG324468
Xylenes, Total	< .003	mg/kg	10/08/07 13:12	WG324468

Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
Total Solids	%	86.6	86.7	0.102	20	L313746-05	WG323933
Total Solids	%	84.8	84.3	0.597	20	L313746-13	WG323934
Total Solids	%	73.7	73.4	0.371	20	L313793-02	WG323935

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Total Solids	%	50	50.0	100.	85-115	WG323933
Total Solids	%	50	50.0	100.	85-115	WG323934
Total Solids	%	50	50.0	100.	85-115	WG323935
1,1,1,2-Tetrachloroethane	mg/kg	.05	0.0423	84.6	66-134	WG324363
1,1,1-Trichloroethane	mg/kg	.05	0.0455	91.0	56-142	WG324363
1,1,2,2-Tetrachloroethane	mg/kg	.05	0.0422	84.4	68-122	WG324363
1,1,2-Trichloroethane	mg/kg	.05	0.0401	80.3	69-118	WG324363
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	.05	0.0411	82.2	62-146	WG324363
1,1-Dichloroethane	mg/kg	.05	0.0439	87.7	55-133	WG324363
1,1-Dichloroethene	mg/kg	.05	0.0407	81.4	65-129	WG324363
1,1-Dichloropropene	mg/kg	.05	0.0432	86.5	63-130	WG324363
1,2,3-Trichlorobenzene	mg/kg	.05	0.0504	101.	60-149	WG324363
1,2,3-Trichloropropane	mg/kg	.05	0.0458	91.6	65-137	WG324363
1,2,4-Trichlorobenzene	mg/kg	.05	0.0500	100.	59-160	WG324363
1,2,4-Trimethylbenzene	mg/kg	.05	0.0428	85.7	59-138	WG324363



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1,2-Dibromo-3-Chloropropane	mg/kg	.05	0.0435	86.9	51-142	WG324363
Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
1,2-Dibromoethane	mg/kg	.05	0.0418	83.5	64-129	WG324363
1,2-Dichlorobenzene	mg/kg	.05	0.0425	85.0	70-126	WG324363
1,2-Dichloroethane	mg/kg	.05	0.0475	94.9	55-139	WG324363
1,2-Dichloropropane	mg/kg	.05	0.0481	96.2	64-124	WG324363
1,3,5-Trimethylbenzene	mg/kg	.05	0.0428	85.6	66-132	WG324363
1,3-Dichlorobenzene	mg/kg	.05	0.0432	86.5	64-139	WG324363
1,3-Dichloropropane	mg/kg	.05	0.0424	84.8	71-122	WG324363
1,4-Dichlorobenzene	mg/kg	.05	0.0422	84.4	66-129	WG324363
2,2-Dichloropropane	mg/kg	.05	0.0463	92.6	51-149	WG324363
2-Butanone (MEK)	mg/kg	.25	0.183	73.2	47-134	WG324363
2-Chloroethyl vinyl ether	mg/kg	.25	0.450	180.	44-142	WG324363
2-Chlorotoluene	mg/kg	.05	0.0436	87.2	64-137	WG324363
4-Chlorotoluene	mg/kg	.05	0.0430	86.1	69-133	WG324363
4-Methyl-2-pentanone (MIBK)	mg/kg	.25	0.239	95.6	55-132	WG324363
Acetone	mg/kg	.25	0.223	89.3	49-158	WG324363
Acrylonitrile	mg/kg	.25	0.236	94.3	44-126	WG324363
Benzene	mg/kg	.05	0.0402	80.4	65-123	WG324363
Bromobenzene	mg/kg	.05	0.0437	87.5	66-137	WG324363
Bromodichloromethane	mg/kg	.05	0.0481	96.3	67-126	WG324363
Bromoform	mg/kg	.05	0.0483	96.5	56-144	WG324363
Bromomethane	mg/kg	.05	0.0414	82.8	37-117	WG324363
Carbon tetrachloride	mg/kg	.05	0.0438	87.7	61-146	WG324363
Chlorobenzene	mg/kg	.05	0.0417	83.3	68-130	WG324363
Chlorodibromomethane	mg/kg	.05	0.0447	89.5	64-131	WG324363
Chloroethane	mg/kg	.05	0.0424	84.8	49-148	WG324363
Chloroform	mg/kg	.05	0.0437	87.4	63-125	WG324363
Chloromethane	mg/kg	.05	0.0460	91.9	41-147	WG324363
cis-1,2-Dichloroethene	mg/kg	.05	0.0433	86.6	68-121	WG324363
cis-1,3-Dichloropropene	mg/kg	.05	0.0483	96.6	69-120	WG324363
Di-isopropyl ether	mg/kg	.05	0.0477	95.4	58-124	WG324363
Dibromomethane	mg/kg	.05	0.0442	88.5	68-122	WG324363
Dichlorodifluoromethane	mg/kg	.05	0.0476	95.2	45-139	WG324363
Ethylbenzene	mg/kg	.05	0.0399	79.8	69-124	WG324363
Hexachlorobutadiene	mg/kg	.05	0.0470	93.9	59-129	WG324363
Isopropylbenzene	mg/kg	.05	0.0433	86.7	69-133	WG324363
Methyl tert-butyl ether	mg/kg	.05	0.0459	91.8	56-132	WG324363
Methylene Chloride	mg/kg	.05	0.0414	82.8	55-125	WG324363
n-Butylbenzene	mg/kg	.05	0.0435	87.0	61-136	WG324363
n-Propylbenzene	mg/kg	.05	0.0433	86.6	68-129	WG324363
Naphthalene	mg/kg	.05	0.0440	88.0	63-146	WG324363
p-Isopropyltoluene	mg/kg	.05	0.0450	90.1	64-141	WG324363
sec-Butylbenzene	mg/kg	.05	0.0433	86.7	66-133	WG324363
Styrene	mg/kg	.05	0.0450	90.1	68-126	WG324363
tert-Butylbenzene	mg/kg	.05	0.0438	87.6	64-136	WG324363
Tetrachloroethene	mg/kg	.05	0.0409	81.9	62-143	WG324363
Toluene	mg/kg	.05	0.0426	85.3	69-120	WG324363
trans-1,2-Dichloroethene	mg/kg	.05	0.0416	83.1	68-130	WG324363
trans-1,3-Dichloropropene	mg/kg	.05	0.0495	99.0	51-115	WG324363
Trichloroethene	mg/kg	.05	0.0443	88.6	70-124	WG324363
Trichlorofluoromethane	mg/kg	.05	0.0433	86.6	46-131	WG324363
Vinyl chloride	mg/kg	.05	0.0417	83.4	49-133	WG324363
Xylenes, Total	mg/kg	.15	0.123	82.2	69-126	WG324363
1,1,1,2-Tetrachloroethane	mg/kg	.05	0.0440	88.0	66-134	WG324372
1,1,1-Trichloroethane	mg/kg	.05	0.0558	112.	56-142	WG324372
1,1,2,2-Tetrachloroethane	mg/kg	.05	0.0470	93.9	68-122	WG324372
1,1,2-Trichloroethane	mg/kg	.05	0.0475	95.0	69-118	WG324372
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	.05	0.0635	127.	62-146	WG324372
1,1-Dichloroethane	mg/kg	.05	0.0565	113.	55-133	WG324372



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1,1-Dichloroethene	mg/kg	.05	0.0444	88.9	65-129	WG324372
Laboratory Control Sample						
Analyte	Units	Known Val	Result	% Rec	Limit	Batch
1,1-Dichloropropene	mg/kg	.05	0.0520	104.	63-130	WG324372
1,2,3-Trichlorobenzene	mg/kg	.05	0.0503	101.	60-149	WG324372
1,2,3-Trichloropropane	mg/kg	.05	0.0499	99.8	65-137	WG324372
1,2,4-Trichlorobenzene	mg/kg	.05	0.0497	99.4	59-160	WG324372
1,2,4-Trimethylbenzene	mg/kg	.05	0.0449	89.9	59-138	WG324372
1,2-Dibromo-3-Chloropropane	mg/kg	.05	0.0431	86.2	51-142	WG324372
1,2-Dibromoethane	mg/kg	.05	0.0445	89.1	64-129	WG324372
1,2-Dichlorobenzene	mg/kg	.05	0.0499	99.9	70-126	WG324372
1,2-Dichloroethane	mg/kg	.05	0.0622	124.	55-139	WG324372
1,2-Dichloropropane	mg/kg	.05	0.0511	102.	64-124	WG324372
1,3,5-Trimethylbenzene	mg/kg	.05	0.0464	92.8	66-132	WG324372
1,3-Dichlorobenzene	mg/kg	.05	0.0425	85.0	64-139	WG324372
1,3-Dichloropropane	mg/kg	.05	0.0484	96.8	71-122	WG324372
1,4-Dichlorobenzene	mg/kg	.05	0.0465	93.1	66-129	WG324372
2,2-Dichloropropane	mg/kg	.05	0.0577	115.	51-149	WG324372
2-Butanone (MEK)	mg/kg	.25	0.254	102.	47-134	WG324372
2-Chloroethyl vinyl ether	mg/kg	.25	0.273	109.	44-142	WG324372
2-Chlorotoluene	mg/kg	.05	0.0472	94.3	64-137	WG324372
4-Chlorotoluene	mg/kg	.05	0.0468	93.6	69-133	WG324372
4-Methyl-2-pentanone (MIBK)	mg/kg	.25	0.293	117.	55-132	WG324372
Acetone	mg/kg	.25	0.333	133.	49-158	WG324372
Acrylonitrile	mg/kg	.25	0.277	111.	44-126	WG324372
Benzene	mg/kg	.05	0.0504	101.	65-123	WG324372
Bromobenzene	mg/kg	.05	0.0495	99.0	66-137	WG324372
Bromodichloromethane	mg/kg	.05	0.0492	98.4	67-126	WG324372
Bromoform	mg/kg	.05	0.0401	80.1	56-144	WG324372
Bromomethane	mg/kg	.05	0.0681	136.	37-117	WG324372
Carbon tetrachloride	mg/kg	.05	0.0552	110.	61-146	WG324372
Chlorobenzene	mg/kg	.05	0.0450	90.0	68-130	WG324372
Chlorodibromomethane	mg/kg	.05	0.0426	85.1	64-131	WG324372
Chloroethane	mg/kg	.05	0.0628	126.	49-148	WG324372
Chloroform	mg/kg	.05	0.0533	107.	63-125	WG324372
Chloromethane	mg/kg	.05	0.0563	113.	41-147	WG324372
cis-1,2-Dichloroethene	mg/kg	.05	0.0525	105.	68-121	WG324372
cis-1,3-Dichloropropene	mg/kg	.05	0.0508	102.	69-120	WG324372
Di-isopropyl ether	mg/kg	.05	0.0625	125.	58-124	WG324372
Dibromomethane	mg/kg	.05	0.0530	106.	68-122	WG324372
Dichlorodifluoromethane	mg/kg	.05	0.0638	128.	45-139	WG324372
Ethylbenzene	mg/kg	.05	0.0442	88.4	69-124	WG324372
Hexachlorobutadiene	mg/kg	.05	0.0484	96.8	59-129	WG324372
Isopropylbenzene	mg/kg	.05	0.0472	94.5	69-133	WG324372
Methyl tert-butyl ether	mg/kg	.05	0.0406	81.3	56-132	WG324372
Methylene Chloride	mg/kg	.05	0.0442	88.4	55-125	WG324372
n-Butylbenzene	mg/kg	.05	0.0574	115.	61-136	WG324372
n-Propylbenzene	mg/kg	.05	0.0482	96.5	68-129	WG324372
Naphthalene	mg/kg	.05	0.0478	95.6	63-146	WG324372
p-Isopropyltoluene	mg/kg	.05	0.0447	89.4	64-141	WG324372
sec-Butylbenzene	mg/kg	.05	0.0480	96.0	66-133	WG324372
Styrene	mg/kg	.05	0.0454	90.8	68-126	WG324372
tert-Butylbenzene	mg/kg	.05	0.0449	89.9	64-136	WG324372
Tetrachloroethene	mg/kg	.05	0.0401	80.2	62-143	WG324372
Toluene	mg/kg	.05	0.0466	93.2	69-120	WG324372
trans-1,2-Dichloroethene	mg/kg	.05	0.0448	89.6	68-130	WG324372
trans-1,3-Dichloropropene	mg/kg	.05	0.0523	105.	51-115	WG324372
Trichloroethene	mg/kg	.05	0.0425	85.0	70-124	WG324372
Trichlorofluoromethane	mg/kg	.05	0.0701	140.	46-131	WG324372
Vinyl chloride	mg/kg	.05	0.0550	110.	49-133	WG324372
Xylenes, Total	mg/kg	.15	0.128	85.4	69-126	WG324372



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1,1,1,2-Tetrachloroethane	mg/l	.05	0.0572	114.	61-134	WG324375
Laboratory Control Sample						
Analyte	Units	Known Val	Result	% Rec	Limit	Batch
1,1,1-Trichloroethane	mg/l	.05	0.0567	113.	62-133	WG324375
1,1,2,2-Tetrachloroethane	mg/l	.05	0.0478	95.7	66-124	WG324375
1,1,2-Trichloroethane	mg/l	.05	0.0524	105.	62-124	WG324375
1,1-Dichloroethane	mg/l	.05	0.0538	108.	59-135	WG324375
1,1-Dichloroethene	mg/l	.05	0.0543	109.	68-136	WG324375
1,1-Dichloropropene	mg/l	.05	0.0521	104.	63-125	WG324375
1,2,3-Trichlorobenzene	mg/l	.05	0.0272	54.4	57-152	WG324375
1,2,3-Trichloropropane	mg/l	.05	0.0503	101.	62-138	WG324375
1,2,4-Trichlorobenzene	mg/l	.05	0.0338	67.5	49-153	WG324375
1,2,4-Trimethylbenzene	mg/l	.05	0.0478	95.5	61-128	WG324375
1,2-Dibromo-3-Chloropropane	mg/l	.05	0.0431	86.2	50-139	WG324375
1,2-Dibromoethane	mg/l	.05	0.0522	104.	70-122	WG324375
1,2-Dichlorobenzene	mg/l	.05	0.0456	91.2	54-135	WG324375
1,2-Dichloroethane	mg/l	.05	0.0508	102.	61-131	WG324375
1,2-Dichloropropane	mg/l	.05	0.0535	107.	64-126	WG324375
1,3,5-Trimethylbenzene	mg/l	.05	0.0491	98.2	65-126	WG324375
1,3-Dichlorobenzene	mg/l	.05	0.0479	95.8	45-143	WG324375
1,3-Dichloropropane	mg/l	.05	0.0507	101.	74-118	WG324375
1,4-Dichlorobenzene	mg/l	.05	0.0446	89.2	48-138	WG324375
2,2-Dichloropropane	mg/l	.05	0.0349	69.7	52-140	WG324375
2-Butanone (MEK)	mg/l	.25	0.241	96.4	50-132	WG324375
2-Chloroethyl vinyl ether	mg/l	.25	0.271	108.	36-136	WG324375
2-Chlorotoluene	mg/l	.05	0.0481	96.2	61-134	WG324375
4-Chlorotoluene	mg/l	.05	0.0471	94.2	67-129	WG324375
4-Methyl-2-pentanone (MIBK)	mg/l	.25	0.251	101.	47-143	WG324375
Acetone	mg/l	.25	0.225	90.2	36-163	WG324375
Acrolein	mg/l	.25	0.244	97.8	27-122	WG324375
Acrylonitrile	mg/l	.25	0.265	106.	44-130	WG324375
Benzene	mg/l	.05	0.0517	103.	63-121	WG324375
Bromobenzene	mg/l	.05	0.0478	95.6	70-130	WG324375
Bromodichloromethane	mg/l	.05	0.0589	118.	64-127	WG324375
Bromoform	mg/l	.05	0.0554	111.	60-139	WG324375
Bromomethane	mg/l	.05	0.0509	102.	30-125	WG324375
Carbon tetrachloride	mg/l	.05	0.0539	108.	70-140	WG324375
Chlorobenzene	mg/l	.05	0.0510	102.	70-126	WG324375
Chlorodibromomethane	mg/l	.05	0.0564	113.	62-132	WG324375
Chloroethane	mg/l	.05	0.0455	91.1	43-146	WG324375
Chloroform	mg/l	.05	0.0522	104.	65-121	WG324375
Chloromethane	mg/l	.05	0.0459	91.9	45-131	WG324375
cis-1,2-Dichloroethene	mg/l	.05	0.0561	112.	68-123	WG324375
cis-1,3-Dichloropropene	mg/l	.05	0.0515	103.	66-121	WG324375
Di-isopropyl ether	mg/l	.05	0.0509	102.	58-127	WG324375
Dibromomethane	mg/l	.05	0.0511	102.	69-119	WG324375
Dichlorodifluoromethane	mg/l	.05	0.0456	91.2	24-155	WG324375
Ethylbenzene	mg/l	.05	0.0512	102.	70-121	WG324375
Hexachlorobutadiene	mg/l	.05	0.0332	66.3	60-119	WG324375
Isopropylbenzene	mg/l	.05	0.0493	98.5	68-128	WG324375
Methyl tert-butyl ether	mg/l	.05	0.0546	109.	51-137	WG324375
Methylene Chloride	mg/l	.05	0.0579	116.	53-131	WG324375
n-Butylbenzene	mg/l	.05	0.0416	83.2	59-134	WG324375
n-Propylbenzene	mg/l	.05	0.0480	96.0	68-123	WG324375
Naphthalene	mg/l	.05	0.0300	59.9	54-150	WG324375
p-Isopropyltoluene	mg/l	.05	0.0480	96.0	64-132	WG324375
sec-Butylbenzene	mg/l	.05	0.0485	97.1	67-124	WG324375
Styrene	mg/l	.05	0.0510	102.	68-123	WG324375
tert-Butylbenzene	mg/l	.05	0.0490	98.0	65-128	WG324375
Tetrachloroethene	mg/l	.05	0.0508	102.	64-134	WG324375
Toluene	mg/l	.05	0.0527	105.	65-120	WG324375
trans-1,2-Dichloroethene	mg/l	.05	0.0545	109.	59-138	WG324375



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trans-1,3-Dichloropropene	mg/l	.05	0.0481	96.2	55-113	WG324375
Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
Trichloroethene	mg/l	.05	0.0574	115.	74-120	WG324375
Trichlorofluoromethane	mg/l	.05	0.0505	101.	49-121	WG324375
Vinyl chloride	mg/l	.05	0.0484	96.8	46-133	WG324375
Xylenes, Total	mg/l	.15	0.154	103.	68-124	WG324375
1,1,1,2-Tetrachloroethane	mg/kg	.05	0.0483	96.7	66-134	WG324468
1,1,1-Trichloroethane	mg/kg	.05	0.0435	87.1	56-142	WG324468
1,1,2,2-Tetrachloroethane	mg/kg	.05	0.0482	96.3	68-122	WG324468
1,1,2-Trichloroethane	mg/kg	.05	0.0446	89.3	69-118	WG324468
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	.05	0.0464	92.8	62-146	WG324468
1,1-Dichloroethane	mg/kg	.05	0.0420	84.1	55-133	WG324468
1,1-Dichloroethene	mg/kg	.05	0.0426	85.1	65-129	WG324468
1,1-Dichloropropene	mg/kg	.05	0.0419	83.8	63-130	WG324468
1,2,3-Trichlorobenzene	mg/kg	.05	0.0495	99.1	60-149	WG324468
1,2,3-Trichloropropane	mg/kg	.05	0.0466	93.3	65-137	WG324468
1,2,4-Trichlorobenzene	mg/kg	.05	0.0471	94.2	59-160	WG324468
1,2,4-Trimethylbenzene	mg/kg	.05	0.0461	92.3	59-138	WG324468
1,2-Dibromo-3-Chloropropane	mg/kg	.05	0.0453	90.6	51-142	WG324468
1,2-Dibromoethane	mg/kg	.05	0.0470	94.1	64-129	WG324468
1,2-Dichlorobenzene	mg/kg	.05	0.0441	88.1	70-126	WG324468
1,2-Dichloroethane	mg/kg	.05	0.0420	84.1	55-139	WG324468
1,2-Dichloropropane	mg/kg	.05	0.0443	88.6	64-124	WG324468
1,3,5-Trimethylbenzene	mg/kg	.05	0.0464	92.9	66-132	WG324468
1,3-Dichlorobenzene	mg/kg	.05	0.0473	94.6	64-139	WG324468
1,3-Dichloropropane	mg/kg	.05	0.0439	87.8	71-122	WG324468
1,4-Dichlorobenzene	mg/kg	.05	0.0433	86.7	66-129	WG324468
2,2-Dichloropropane	mg/kg	.05	0.0440	88.0	51-149	WG324468
2-Butanone (MEK)	mg/kg	.25	0.207	82.7	47-134	WG324468
2-Chloroethyl vinyl ether	mg/kg	.25	0.230	92.1	44-142	WG324468
2-Chlorotoluene	mg/kg	.05	0.0449	89.8	64-137	WG324468
4-Chlorotoluene	mg/kg	.05	0.0450	90.0	69-133	WG324468
4-Methyl-2-pentanone (MIBK)	mg/kg	.25	0.245	98.0	55-132	WG324468
Acetone	mg/kg	.25	0.209	83.4	49-158	WG324468
Acrylonitrile	mg/kg	.25	0.220	88.0	44-126	WG324468
Benzene	mg/kg	.05	0.0423	84.7	65-123	WG324468
Bromobenzene	mg/kg	.05	0.0456	91.3	66-137	WG324468
Bromodichloromethane	mg/kg	.05	0.0443	88.6	67-126	WG324468
Bromoform	mg/kg	.05	0.0505	101.	56-144	WG324468
Bromomethane	mg/kg	.05	0.0508	102.	37-117	WG324468
Carbon tetrachloride	mg/kg	.05	0.0431	86.3	61-146	WG324468
Chlorobenzene	mg/kg	.05	0.0458	91.6	68-130	WG324468
Chlorodibromomethane	mg/kg	.05	0.0466	93.2	64-131	WG324468
Chloroethane	mg/kg	.05	0.0521	104.	49-148	WG324468
Chloroform	mg/kg	.05	0.0418	83.6	63-125	WG324468
Chloromethane	mg/kg	.05	0.0581	116.	41-147	WG324468
cis-1,2-Dichloroethene	mg/kg	.05	0.0453	90.6	68-121	WG324468
cis-1,3-Dichloropropene	mg/kg	.05	0.0452	90.4	69-120	WG324468
Di-isopropyl ether	mg/kg	.05	0.0423	84.6	58-124	WG324468
Dibromomethane	mg/kg	.05	0.0455	91.0	68-122	WG324468
Dichlorodifluoromethane	mg/kg	.05	0.0824	165.	45-139	WG324468
Ethylbenzene	mg/kg	.05	0.0461	92.2	69-124	WG324468
Hexachlorobutadiene	mg/kg	.05	0.0450	90.0	59-129	WG324468
Isopropylbenzene	mg/kg	.05	0.0466	93.2	69-133	WG324468
Methyl tert-butyl ether	mg/kg	.05	0.0429	85.7	56-132	WG324468
Methylene Chloride	mg/kg	.05	0.0415	83.0	55-125	WG324468
n-Butylbenzene	mg/kg	.05	0.0434	86.9	61-136	WG324468
n-Propylbenzene	mg/kg	.05	0.0455	90.9	68-129	WG324468
Naphthalene	mg/kg	.05	0.0464	92.8	63-146	WG324468
p-Isopropyltoluene	mg/kg	.05	0.0470	93.9	64-141	WG324468



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sec-Butylbenzene	mg/kg	.05	0.0463	92.6	66-133	WG324468
Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
Styrene	mg/kg	.05	0.0488	97.6	68-126	WG324468
tert-Butylbenzene	mg/kg	.05	0.0462	92.4	64-136	WG324468
Tetrachloroethene	mg/kg	.05	0.0486	97.1	62-143	WG324468
Toluene	mg/kg	.05	0.0433	86.6	69-120	WG324468
trans-1,2-Dichloroethene	mg/kg	.05	0.0418	83.6	68-130	WG324468
trans-1,3-Dichloropropene	mg/kg	.05	0.0454	90.8	51-115	WG324468
Trichloroethene	mg/kg	.05	0.0450	90.0	70-124	WG324468
Trichlorofluoromethane	mg/kg	.05	0.0514	103.	46-131	WG324468
Vinyl chloride	mg/kg	.05	0.0544	109.	49-133	WG324468
Xylenes, Total	mg/kg	.15	0.139	92.4	69-126	WG324468

Analyte	Units	Laboratory Control	Sample	Duplicate	RPD	Limit	% Rec	Batch
		LCSD Res	Ref Res					
1,1,1,2-Tetrachloroethane	mg/kg	0.0442	0.0423	4.28	16	88		WG324363
1,1,1-Trichloroethane	mg/kg	0.0478	0.0455	4.88	16	96		WG324363
1,1,2,2-Tetrachloroethane	mg/kg	0.0442	0.0422	4.66	16	88		WG324363
1,1,2-Trichloroethane	mg/kg	0.0423	0.0401	5.25	14	85		WG324363
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.0444	0.0411	7.58	17	89		WG324363
1,1-Dichloroethane	mg/kg	0.0466	0.0439	6.06	16	93		WG324363
1,1-Dichloroethene	mg/kg	0.0443	0.0407	8.45	19	89		WG324363
1,1-Dichloropropene	mg/kg	0.0467	0.0432	7.72	17	93		WG324363
1,2,3-Trichlorobenzene	mg/kg	0.0513	0.0504	1.92	21	103		WG324363
1,2,3-Trichloropropane	mg/kg	0.0464	0.0458	1.33	19	93		WG324363
1,2,4-Trichlorobenzene	mg/kg	0.0519	0.0500	3.67	20	104		WG324363
1,2,4-Trimethylbenzene	mg/kg	0.0449	0.0428	4.75	15	90		WG324363
1,2-Dibromo-3-Chloropropane	mg/kg	0.0418	0.0435	3.91	20	84		WG324363
1,2-Dibromoethane	mg/kg	0.0431	0.0418	3.12	23	86		WG324363
1,2-Dichlorobenzene	mg/kg	0.0429	0.0425	0.992	15	86		WG324363
1,2-Dichloroethane	mg/kg	0.0485	0.0475	2.22	15	97		WG324363
1,2-Dichloropropane	mg/kg	0.0495	0.0481	2.83	16	99		WG324363
1,3,5-Trimethylbenzene	mg/kg	0.0448	0.0428	4.59	15	90		WG324363
1,3-Dichlorobenzene	mg/kg	0.0445	0.0432	2.89	18	89		WG324363
1,3-Dichloropropane	mg/kg	0.0438	0.0424	3.37	15	88		WG324363
1,4-Dichlorobenzene	mg/kg	0.0431	0.0422	2.12	17	86		WG324363
2,2-Dichloropropane	mg/kg	0.0498	0.0463	7.19	19	100		WG324363
2-Butanone (MEK)	mg/kg	0.188	0.183	2.50	21	75		WG324363
2-Chloroethyl vinyl ether	mg/kg	0.269	0.450	50.5	14	107		WG324363
2-Chlorotoluene	mg/kg	0.0453	0.0436	3.91	19	91		WG324363
4-Chlorotoluene	mg/kg	0.0454	0.0430	5.36	16	91		WG324363
4-Methyl-2-pentanone (MIBK)	mg/kg	0.236	0.239	1.27	19	94		WG324363
Acetone	mg/kg	0.229	0.223	2.53	31	92		WG324363
Acrylonitrile	mg/kg	0.240	0.236	1.82	18	96		WG324363
Benzene	mg/kg	0.0428	0.0402	6.25	13	86		WG324363
Bromobenzene	mg/kg	0.0452	0.0437	3.34	15	90		WG324363
Bromodichloromethane	mg/kg	0.0489	0.0481	1.55	13	98		WG324363
Bromoform	mg/kg	0.0480	0.0483	0.592	16	96		WG324363
Bromomethane	mg/kg	0.0439	0.0414	5.99	20	88		WG324363
Carbon tetrachloride	mg/kg	0.0477	0.0438	8.34	16	95		WG324363
Chlorobenzene	mg/kg	0.0434	0.0417	4.06	16	87		WG324363
Chlorodibromomethane	mg/kg	0.0459	0.0447	2.52	16	92		WG324363
Chloroethane	mg/kg	0.0440	0.0424	3.59	16	88		WG324363
Chloroform	mg/kg	0.0459	0.0437	4.94	14	92		WG324363
Chloromethane	mg/kg	0.0475	0.0460	3.19	17	95		WG324363
cis-1,2-Dichloroethene	mg/kg	0.0465	0.0433	7.04	15	93		WG324363
cis-1,3-Dichloropropene	mg/kg	0.0490	0.0483	1.50	15	98		WG324363
Di-isopropyl ether	mg/kg	0.0497	0.0477	4.21	15	99		WG324363
Dibromomethane	mg/kg	0.0452	0.0442	2.06	14	90		WG324363
Dichlorodifluoromethane	mg/kg	0.0517	0.0476	8.38	19	103		WG324363



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L313746

October 08, 2007

Ethylbenzene	mg/kg	0.0418	0.0399	4.55	15	84	WG324363
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Analyte	Laboratory Control Sample Duplicate						
	Units	LCSD	Res	Ref	Res	RPD	Limit %Rec Batch
Hexachlorobutadiene	mg/kg	0.0481	0.0470	2.44	16	96	WG324363
Isopropylbenzene	mg/kg	0.0448	0.0433	3.23	16	90	WG324363
Methyl tert-butyl ether	mg/kg	0.0473	0.0459	2.98	16	95	WG324363
Methylene Chloride	mg/kg	0.0430	0.0414	3.69	15	86	WG324363
n-Butylbenzene	mg/kg	0.0450	0.0435	3.46	18	90	WG324363
n-Propylbenzene	mg/kg	0.0460	0.0433	5.95	16	92	WG324363
Naphthalene	mg/kg	0.0447	0.0440	1.55	21	89	WG324363
p-Isopropyltoluene	mg/kg	0.0472	0.0450	4.61	16	94	WG324363
sec-Butylbenzene	mg/kg	0.0450	0.0433	3.85	15	90	WG324363
Styrene	mg/kg	0.0462	0.0450	2.61	16	92	WG324363
tert-Butylbenzene	mg/kg	0.0461	0.0438	5.13	16	92	WG324363
Tetrachloroethene	mg/kg	0.0433	0.0409	5.72	18	87	WG324363
Toluene	mg/kg	0.0446	0.0426	4.54	13	89	WG324363
trans-1,2-Dichloroethene	mg/kg	0.0436	0.0416	4.74	17	87	WG324363
trans-1,3-Dichloropropene	mg/kg	0.0495	0.0495	0.0789	17	99	WG324363
Trichloroethene	mg/kg	0.0458	0.0443	3.44	14	92	WG324363
Trichlorofluoromethane	mg/kg	0.0458	0.0433	5.64	15	92	WG324363
Vinyl chloride	mg/kg	0.0453	0.0417	8.31	14	91	WG324363
Xylenes, Total	mg/kg	0.127	0.123	3.30	14	85	WG324363
1,1,1,2-Tetrachloroethane	mg/kg	0.0431	0.0440	1.96	16	86	WG324372
1,1,1-Trichloroethane	mg/kg	0.0515	0.0558	7.99	16	103	WG324372
1,1,2,2-Tetrachloroethane	mg/kg	0.0470	0.0470	0.0588	16	94	WG324372
1,1,2-Trichloroethane	mg/kg	0.0469	0.0475	1.19	14	94	WG324372
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.0577	0.0635	9.50	17	115	WG324372
1,1-Dichloroethane	mg/kg	0.0499	0.0565	12.4	16	100	WG324372
1,1-Dichloroethene	mg/kg	0.0410	0.0444	7.99	19	82	WG324372
1,1-Dichloropropene	mg/kg	0.0491	0.0520	5.83	17	98	WG324372
1,2,3-Trichlorobenzene	mg/kg	0.0477	0.0503	5.41	21	95	WG324372
1,2,3-Trichloropropane	mg/kg	0.0475	0.0499	4.92	19	95	WG324372
1,2,4-Trichlorobenzene	mg/kg	0.0462	0.0497	7.26	20	92	WG324372
1,2,4-Trimethylbenzene	mg/kg	0.0434	0.0449	3.37	15	87	WG324372
1,2-Dibromo-3-Chloropropane	mg/kg	0.0401	0.0431	7.23	20	80	WG324372
1,2-Dibromoethane	mg/kg	0.0436	0.0445	2.22	23	87	WG324372
1,2-Dichlorobenzene	mg/kg	0.0476	0.0499	4.79	15	95	WG324372
1,2-Dichloroethane	mg/kg	0.0604	0.0622	2.97	15	121	WG324372
1,2-Dichloropropane	mg/kg	0.0511	0.0511	0.0503	16	102	WG324372
1,3,5-Trimethylbenzene	mg/kg	0.0443	0.0464	4.58	15	89	WG324372
1,3-Dichlorobenzene	mg/kg	0.0412	0.0425	3.19	18	82	WG324372
1,3-Dichloropropane	mg/kg	0.0475	0.0484	1.89	15	95	WG324372
1,4-Dichlorobenzene	mg/kg	0.0450	0.0465	3.41	17	90	WG324372
2,2-Dichloropropane	mg/kg	0.0508	0.0577	12.8	19	102	WG324372
2-Butanone (MEK)	mg/kg	0.239	0.254	5.88	21	96	WG324372
2-Chloroethyl vinyl ether	mg/kg	0.293	0.273	6.81	14	117	WG324372
2-Chlorotoluene	mg/kg	0.0452	0.0472	4.25	19	90	WG324372
4-Chlorotoluene	mg/kg	0.0457	0.0468	2.50	16	91	WG324372
4-Methyl-2-pentanone (MIBK)	mg/kg	0.279	0.293	4.98	19	111	WG324372
Acetone	mg/kg	0.309	0.333	7.55	31	124	WG324372
Acrylonitrile	mg/kg	0.259	0.277	6.46	18	104	WG324372
Benzene	mg/kg	0.0481	0.0504	4.58	13	96	WG324372
Bromobenzene	mg/kg	0.0479	0.0495	3.20	15	96	WG324372
Bromodichloromethane	mg/kg	0.0475	0.0492	3.58	13	95	WG324372
Bromoform	mg/kg	0.0397	0.0401	0.840	16	79	WG324372
Bromomethane	mg/kg	0.0644	0.0681	5.65	20	129	WG324372
Carbon tetrachloride	mg/kg	0.0511	0.0552	7.74	16	102	WG324372
Chlorobenzene	mg/kg	0.0435	0.0450	3.48	16	87	WG324372
Chlorodibromomethane	mg/kg	0.0426	0.0426	0.125	16	85	WG324372
Chloroethane	mg/kg	0.0575	0.0628	8.82	16	115	WG324372
Chloroform	mg/kg	0.0512	0.0533	4.03	14	102	WG324372



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L313746

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Chloromethane mg/kg 0.0516 0.0563 8.63 17 103 WG324372

Analyte	Units	LCS	Duplicate	RPD	Limit	%Rec	Batch
		Res	Ref				
cis-1,2-Dichloroethene	mg/kg	0.0493	0.0525	6.18	15	99	WG324372
cis-1,3-Dichloropropene	mg/kg	0.0488	0.0508	4.07	15	98	WG324372
Di-isopropyl ether	mg/kg	0.0515	0.0625	19.3	15	103	WG324372
Dibromomethane	mg/kg	0.0510	0.0530	3.85	14	102	WG324372
Dichlorodifluoromethane	mg/kg	0.0585	0.0638	8.72	19	117	WG324372
Ethylbenzene	mg/kg	0.0422	0.0442	4.66	15	84	WG324372
Hexachlorobutadiene	mg/kg	0.0448	0.0484	7.69	16	90	WG324372
Isopropylbenzene	mg/kg	0.0443	0.0472	6.43	16	89	WG324372
Methyl tert-butyl ether	mg/kg	0.0378	0.0406	7.22	16	76	WG324372
Methylene Chloride	mg/kg	0.0432	0.0442	2.21	15	86	WG324372
n-Butylbenzene	mg/kg	0.0530	0.0574	8.04	18	106	WG324372
n-Propylbenzene	mg/kg	0.0453	0.0482	6.30	16	91	WG324372
Naphthalene	mg/kg	0.0455	0.0478	4.88	21	91	WG324372
p-Isopropyltoluene	mg/kg	0.0419	0.0447	6.48	16	84	WG324372
sec-Butylbenzene	mg/kg	0.0447	0.0480	7.07	15	89	WG324372
Styrene	mg/kg	0.0444	0.0454	2.17	16	89	WG324372
tert-Butylbenzene	mg/kg	0.0423	0.0449	6.08	16	85	WG324372
Tetrachloroethene	mg/kg	0.0368	0.0401	8.42	18	74	WG324372
Toluene	mg/kg	0.0435	0.0466	6.96	13	87	WG324372
trans-1,2-Dichloroethene	mg/kg	0.0419	0.0448	6.59	17	84	WG324372
trans-1,3-Dichloropropene	mg/kg	0.0503	0.0523	3.80	17	101	WG324372
Trichloroethene	mg/kg	0.0396	0.0425	7.00	14	79	WG324372
Trichlorofluoromethane	mg/kg	0.0646	0.0701	8.19	15	129	WG324372
Vinyl chloride	mg/kg	0.0502	0.0550	9.08	14	100	WG324372
Xylenes, Total	mg/kg	0.124	0.128	3.41	14	83	WG324372
1,1,1,2-Tetrachloroethane	mg/l	0.0586	0.0572	2.29	17	117	WG324375
1,1,1-Trichloroethane	mg/l	0.0568	0.0567	0.133	17	114	WG324375
1,1,2,2-Tetrachloroethane	mg/l	0.0497	0.0478	3.88	16	99	WG324375
1,1,2-Trichloroethane	mg/l	0.0547	0.0524	4.22	16	109	WG324375
1,1-Dichloroethane	mg/l	0.0556	0.0538	3.30	22	111	WG324375
1,1-Dichloroethene	mg/l	0.0534	0.0543	1.69	17	107	WG324375
1,1-Dichloropropene	mg/l	0.0532	0.0521	2.03	17	106	WG324375
1,2,3-Trichlorobenzene	mg/l	0.0383	0.0272	34.0	19	77	WG324375
1,2,3-Trichloropropane	mg/l	0.0519	0.0503	3.21	18	104	WG324375
1,2,4-Trichlorobenzene	mg/l	0.0430	0.0338	24.1	20	86	WG324375
1,2,4-Trimethylbenzene	mg/l	0.0495	0.0478	3.49	18	99	WG324375
1,2-Dibromo-3-Chloropropane	mg/l	0.0505	0.0431	15.9	19	101	WG324375
1,2-Dibromoethane	mg/l	0.0551	0.0522	5.42	16	110	WG324375
1,2-Dichlorobenzene	mg/l	0.0475	0.0456	4.04	16	95	WG324375
1,2-Dichloroethane	mg/l	0.0513	0.0508	0.905	15	103	WG324375
1,2-Dichloropropane	mg/l	0.0546	0.0535	2.06	18	109	WG324375
1,3,5-Trimethylbenzene	mg/l	0.0504	0.0491	2.70	17	101	WG324375
1,3-Dichlorobenzene	mg/l	0.0489	0.0479	2.11	17	98	WG324375
1,3-Dichloropropane	mg/l	0.0529	0.0507	4.10	15	106	WG324375
1,4-Dichlorobenzene	mg/l	0.0456	0.0446	2.27	17	91	WG324375
2,2-Dichloropropane	mg/l	0.0351	0.0349	0.730	21	70	WG324375
2-Butanone (MEK)	mg/l	0.261	0.241	7.93	21	104	WG324375
2-Chloroethyl vinyl ether	mg/l	0.281	0.271	3.76	28	113	WG324375
2-Chlorotoluene	mg/l	0.0493	0.0481	2.48	26	99	WG324375
4-Chlorotoluene	mg/l	0.0486	0.0471	3.05	17	97	WG324375
4-Methyl-2-pentanone (MIBK)	mg/l	0.273	0.251	8.24	21	109	WG324375
Acetone	mg/l	0.250	0.225	10.1	20	100	WG324375
Acrolein	mg/l	0.251	0.244	2.59	13	100	WG324375
Acrylonitrile	mg/l	0.283	0.265	6.38	20	113	WG324375
Benzene	mg/l	0.0534	0.0517	3.28	16	107	WG324375
Bromobenzene	mg/l	0.0492	0.0478	2.81	16	98	WG324375
Bromodichloromethane	mg/l	0.0605	0.0589	2.67	17	121	WG324375
Bromoform	mg/l	0.0588	0.0554	5.91	15	118	WG324375



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Bromomethane		mg/l	0.0520	0.0509	2.02	21	104	WG324375
Laboratory Control Sample Duplicate								
Analyte	Units	LCSD	Res	Ref	Res	RPD	Limit	%Rec
Batch								
Carbon tetrachloride	mg/l	0.0552	0.0539	2.41	17	110	WG324375	
Chlorobenzene	mg/l	0.0534	0.0510	4.66	16	107	WG324375	
Chlorodibromomethane	mg/l	0.0592	0.0564	4.90	15	118	WG324375	
Chloroethane	mg/l	0.0455	0.0455	0.0198	24	91	WG324375	
Chloroform	mg/l	0.0540	0.0522	3.51	15	108	WG324375	
Chloromethane	mg/l	0.0472	0.0459	2.78	22	94	WG324375	
cis-1,2-Dichloroethene	mg/l	0.0566	0.0561	0.897	15	113	WG324375	
cis-1,3-Dichloropropene	mg/l	0.0516	0.0515	0.210	18	103	WG324375	
Di-isopropyl ether	mg/l	0.0533	0.0509	4.61	18	107	WG324375	
Dibromomethane	mg/l	0.0507	0.0511	0.700	16	101	WG324375	
Dichlorodifluoromethane	mg/l	0.0474	0.0456	3.89	22	95	WG324375	
Ethylbenzene	mg/l	0.0538	0.0512	4.83	17	108	WG324375	
Hexachlorobutadiene	mg/l	0.0390	0.0332	16.3	16	78	WG324375	
Isopropylbenzene	mg/l	0.0512	0.0493	3.86	17	102	WG324375	
Methyl tert-butyl ether	mg/l	0.0580	0.0546	6.12	18	116	WG324375	
Methylene Chloride	mg/l	0.0591	0.0579	2.08	17	118	WG324375	
n-Butylbenzene	mg/l	0.0429	0.0416	3.09	19	86	WG324375	
n-Propylbenzene	mg/l	0.0496	0.0480	3.23	17	99	WG324375	
Naphthalene	mg/l	0.0416	0.0300	32.6	17	83	WG324375	
p-Isopropyltoluene	mg/l	0.0498	0.0480	3.66	18	100	WG324375	
sec-Butylbenzene	mg/l	0.0500	0.0485	2.96	18	100	WG324375	
Styrene	mg/l	0.0530	0.0510	3.86	17	106	WG324375	
tert-Butylbenzene	mg/l	0.0512	0.0490	4.46	17	102	WG324375	
Tetrachloroethene	mg/l	0.0533	0.0508	4.68	18	107	WG324375	
Toluene	mg/l	0.0537	0.0527	1.84	18	107	WG324375	
trans-1,2-Dichloroethene	mg/l	0.0567	0.0545	3.97	22	113	WG324375	
trans-1,3-Dichloropropene	mg/l	0.0480	0.0481	0.140	18	96	WG324375	
Trichloroethene	mg/l	0.0592	0.0574	3.07	16	118	WG324375	
Trichlorofluoromethane	mg/l	0.0510	0.0505	1.03	19	102	WG324375	
Vinyl chloride	mg/l	0.0492	0.0484	1.58	17	98	WG324375	
Xylenes, Total	mg/l	0.159	0.154	3.21	17	106	WG324375	
1,1,1,2-Tetrachloroethane	mg/kg	0.0501	0.0483	3.48	16	100	WG324468	
1,1,1-Trichloroethane	mg/kg	0.0439	0.0435	0.874	16	88	WG324468	
1,1,2,2-Tetrachloroethane	mg/kg	0.0471	0.0482	2.29	16	94	WG324468	
1,1,2-Trichloroethane	mg/kg	0.0460	0.0446	3.09	14	92	WG324468	
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.0466	0.0464	0.429	17	93	WG324468	
1,1-Dichloroethane	mg/kg	0.0428	0.0420	1.82	16	86	WG324468	
1,1-Dichloroethene	mg/kg	0.0428	0.0426	0.553	19	86	WG324468	
1,1-Dichloropropene	mg/kg	0.0426	0.0419	1.69	17	85	WG324468	
1,2,3-Trichlorobenzene	mg/kg	0.0504	0.0495	1.80	21	101	WG324468	
1,2,3-Trichloropropane	mg/kg	0.0452	0.0466	3.07	19	90	WG324468	
1,2,4-Trichlorobenzene	mg/kg	0.0501	0.0471	6.13	20	100	WG324468	
1,2,4-Trimethylbenzene	mg/kg	0.0491	0.0461	6.19	15	98	WG324468	
1,2-Dibromo-3-Chloropropane	mg/kg	0.0428	0.0453	5.69	20	86	WG324468	
1,2-Dibromoethane	mg/kg	0.0471	0.0470	0.0788	23	94	WG324468	
1,2-Dichlorobenzene	mg/kg	0.0459	0.0441	4.00	15	92	WG324468	
1,2-Dichloroethane	mg/kg	0.0422	0.0420	0.451	15	84	WG324468	
1,2-Dichloropropane	mg/kg	0.0451	0.0443	1.69	16	90	WG324468	
1,3,5-Trimethylbenzene	mg/kg	0.0498	0.0464	7.01	15	100	WG324468	
1,3-Dichlorobenzene	mg/kg	0.0512	0.0473	7.96	18	102	WG324468	
1,3-Dichloropropane	mg/kg	0.0442	0.0439	0.613	15	88	WG324468	
1,4-Dichlorobenzene	mg/kg	0.0462	0.0433	6.35	17	92	WG324468	
2,2-Dichloropropane	mg/kg	0.0450	0.0440	2.23	19	90	WG324468	
2-Butanone (MEK)	mg/kg	0.178	0.207	14.8	21	71	WG324468	
2-Chloroethyl vinyl ether	mg/kg	0.222	0.230	3.58	14	89	WG324468	
2-Chlorotoluene	mg/kg	0.0473	0.0449	5.09	19	95	WG324468	
4-Chlorotoluene	mg/kg	0.0481	0.0450	6.70	16	96	WG324468	
4-Methyl-2-pentanone (MIBK)	mg/kg	0.219	0.245	11.2	19	88	WG324468	



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Mr. Atef Takla
9001 Glenwood Ave

Quality Assurance Report Level II

Raleigh, NC 27617-7505

L313746

October 08, 2007

Acetone mg/kg 0.178 0.209 15.8 31 71 WG324468

Analyte	Units	LCSD	Res	Ref	Res	RPD	Limit	%Rec	Batch
Laboratory Control Sample Duplicate									
Acrylonitrile	mg/kg	0.197	0.220	11.1	18	79	WG324468		
Benzene	mg/kg	0.0433	0.0423	2.18	13	87	WG324468		
Bromobenzene	mg/kg	0.0474	0.0456	3.79	15	95	WG324468		
Bromodichloromethane	mg/kg	0.0451	0.0443	1.73	13	90	WG324468		
Bromoform	mg/kg	0.0502	0.0505	0.639	16	100	WG324468		
Bromomethane	mg/kg	0.0505	0.0508	0.600	20	101	WG324468		
Carbon tetrachloride	mg/kg	0.0442	0.0431	2.41	16	88	WG324468		
Chlorobenzene	mg/kg	0.0476	0.0458	3.88	16	95	WG324468		
Chlorodibromomethane	mg/kg	0.0479	0.0466	2.81	16	96	WG324468		
Chloroethane	mg/kg	0.0515	0.0521	1.16	16	103	WG324468		
Chloroform	mg/kg	0.0426	0.0418	2.03	14	85	WG324468		
Chloromethane	mg/kg	0.0574	0.0581	1.18	17	115	WG324468		
cis-1,2-Dichloroethene	mg/kg	0.0458	0.0453	1.00	15	92	WG324468		
cis-1,3-Dichloropropene	mg/kg	0.0460	0.0452	3.70	15	94	WG324468		
Di-isopropyl ether	mg/kg	0.0426	0.0423	0.728	15	85	WG324468		
Dibromomethane	mg/kg	0.0457	0.0455	0.379	14	91	WG324468		
Dichlorodifluoromethane	mg/kg	0.0824	0.0824	0.0193	19	165	WG324468		
Ethylbenzene	mg/kg	0.0477	0.0461	3.44	15	95	WG324468		
Hexachlorobutadiene	mg/kg	0.0473	0.0450	4.99	16	95	WG324468		
Isopropylbenzene	mg/kg	0.0489	0.0466	4.81	16	98	WG324468		
Methyl tert-butyl ether	mg/kg	0.0417	0.0429	2.82	16	83	WG324468		
Methylene Chloride	mg/kg	0.0423	0.0415	1.85	15	85	WG324468		
n-Butylbenzene	mg/kg	0.0462	0.0434	6.14	18	92	WG324468		
n-Propylbenzene	mg/kg	0.0486	0.0455	6.68	16	97	WG324468		
Naphthalene	mg/kg	0.0441	0.0464	5.18	21	88	WG324468		
p-Isopropyltoluene	mg/kg	0.0505	0.0470	7.29	16	101	WG324468		
sec-Butylbenzene	mg/kg	0.0492	0.0463	6.08	15	98	WG324468		
Styrene	mg/kg	0.0513	0.0488	5.00	16	103	WG324468		
tert-Butylbenzene	mg/kg	0.0494	0.0462	6.61	16	99	WG324468		
Tetrachloroethene	mg/kg	0.0508	0.0486	4.54	18	102	WG324468		
Toluene	mg/kg	0.0445	0.0433	2.81	13	89	WG324468		
trans-1,2-Dichloroethene	mg/kg	0.0421	0.0418	0.775	17	84	WG324468		
trans-1,3-Dichloropropene	mg/kg	0.0462	0.0454	1.65	17	92	WG324468		
Trichloroethene	mg/kg	0.0471	0.0450	4.52	14	94	WG324468		
Trichlorofluoromethane	mg/kg	0.0506	0.0514	1.58	15	101	WG324468		
Vinyl chloride	mg/kg	0.0542	0.0544	0.218	14	108	WG324468		
Xylenes, Total	mg/kg	0.145	0.139	4.78	14	97	WG324468		

Analyte	Units	MS	Res	Ref	Res	TV	% Rec	Limit	Ref Samp	Batch
Matrix Spike										
1,1,1,2-Tetrachloroethane	mg/kg	0.180	0.00	.05	72.2	56-123	L313260-20	WG324363		
1,1,1-Trichloroethane	mg/kg	0.133	0.00	.05	53.1	53-139	L313260-20	WG324363		
1,1,2,2-Tetrachloroethane	mg/kg	0.185	0.00	.05	73.9	37-133	L313260-20	WG324363		
1,1,2-Trichloroethane	mg/kg	0.169	0.00	.05	67.4	61-113	L313260-20	WG324363		
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.107	0.00	.05	42.8	56-115	L313260-20	WG324363		
1,1-Dichloroethane	mg/kg	0.133	0.00	.05	53.4	64-127	L313260-20	WG324363		
1,1-Dichloroethene	mg/kg	0.101	0.00	.05	40.5	64-126	L313260-20	WG324363		
1,1-Dichloropropene	mg/kg	0.104	0.00	.05	41.6	55-108	L313260-20	WG324363		
1,2,3-Trichlorobenzene	mg/kg	0.136	0.00	.05	54.3	30-113	L313260-20	WG324363		
1,2,3-Trichloropropane	mg/kg	0.193	0.00	.05	77.1	47-138	L313260-20	WG324363		
1,2,4-Trichlorobenzene	mg/kg	0.106	0.00	.05	42.6	30-104	L313260-20	WG324363		
1,2,4-Trimethylbenzene	mg/kg	0.134	0.00	.05	53.6	38-108	L313260-20	WG324363		
1,2-Dibromo-3-Chloropropane	mg/kg	0.196	0.00	.05	78.4	39-135	L313260-20	WG324363		
1,2-Dibromoethane	mg/kg	0.166	0.00	.05	66.3	57-120	L313260-20	WG324363		
1,2-Dichlorobenzene	mg/kg	0.156	0.00	.05	62.2	36-110	L313260-20	WG324363		
1,2-Dichloroethane	mg/kg	0.140	0.00	.05	56.1	46-147	L313260-20	WG324363		
1,2-Dichloropropane	mg/kg	0.156	0.00	.05	62.4	63-124	L313260-20	WG324363		
1,3,5-Trimethylbenzene	mg/kg	0.133	0.00	.05	53.3	39-106	L313260-20	WG324363		



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1,3-Dichlorobenzene mg/kg 0.131 0.00 .05 52.3 31-109 L313260-20 WG324363

Analyte	Units	MS Res	Matrix Spike Ref Res	TV	% Rec	Limit	Ref Samp	Batch
1,3-Dichloropropane	mg/kg	0.166	0.00	.05	66.6	65-116	L313260-20	WG324363
1,4-Dichlorobenzene	mg/kg	0.130	0.00	.05	52.0	32-102	L313260-20	WG324363
2,2-Dichloropropane	mg/kg	0.116	0.00	.05	46.2	49-138	L313260-20	WG324363
2-Butanone (MEK)	mg/kg	0.624	0.00	.25	49.9	43-137	L313260-20	WG324363
2-Chloroethyl vinyl ether	mg/kg	0.563	0.00	.25	45.0	40-138	L313260-20	WG324363
2-Chlorotoluene	mg/kg	0.144	0.00	.05	57.6	45-111	L313260-20	WG324363
4-Chlorotoluene	mg/kg	0.127	0.00	.05	51.0	38-106	L313260-20	WG324363
4-Methyl-2-pentanone (MIBK)	mg/kg	0.810	0.00	.25	64.8	47-133	L313260-20	WG324363
Acetone	mg/kg	0.742	0.00	.25	59.4	33-148	L313260-20	WG324363
Acrylonitrile	mg/kg	0.779	0.00	.25	62.4	40-126	L313260-20	WG324363
Benzene	mg/kg	0.122	0.00	.05	48.7	54-119	L313260-20	WG324363
Bromobenzene	mg/kg	0.155	0.00	.05	62.0	45-116	L313260-20	WG324363
Bromodichloromethane	mg/kg	0.163	0.00	.05	65.3	51-125	L313260-20	WG324363
Bromoform	mg/kg	0.200	0.00	.05	79.9	41-135	L313260-20	WG324363
Bromomethane	mg/kg	0.129	0.00	.05	51.7	30-113	L313260-20	WG324363
Carbon tetrachloride	mg/kg	0.121	0.00	.05	48.3	47-133	L313260-20	WG324363
Chlorobenzene	mg/kg	0.146	0.00	.05	58.5	53-110	L313260-20	WG324363
Chlorodibromomethane	mg/kg	0.183	0.00	.05	73.2	53-125	L313260-20	WG324363
Chloroethane	mg/kg	0.123	0.00	.05	49.4	42-149	L313260-20	WG324363
Chloroform	mg/kg	0.145	0.00	.05	57.9	61-127	L313260-20	WG324363
Chloromethane	mg/kg	0.113	0.00	.05	45.3	35-140	L313260-20	WG324363
cis-1,2-Dichloroethene	mg/kg	0.136	0.00	.05	54.3	67-120	L313260-20	WG324363
cis-1,3-Dichloropropene	mg/kg	0.136	0.00	.05	54.4	53-113	L313260-20	WG324363
Di-isopropyl ether	mg/kg	0.155	0.00	.05	61.9	53-132	L313260-20	WG324363
Dibromomethane	mg/kg	0.149	0.00	.05	59.4	57-126	L313260-20	WG324363
Dichlorodifluoromethane	mg/kg	0.103	0.00	.05	41.2	34-140	L313260-20	WG324363
Ethylbenzene	mg/kg	0.139	0.00	.05	55.4	47-111	L313260-20	WG324363
Hexachlorobutadiene	mg/kg	0.120	0.00	.05	48.0	30-91	L313260-20	WG324363
Isopropylbenzene	mg/kg	0.144	0.00	.05	57.6	49-110	L313260-20	WG324363
Methyl tert-butyl ether	mg/kg	0.156	0.00	.05	62.3	63-131	L313260-20	WG324363
Methylene Chloride	mg/kg	0.147	0.0300	.05	46.9	54-123	L313260-20	WG324363
n-Butylbenzene	mg/kg	0.113	0.00	.05	45.0	36-94	L313260-20	WG324363
n-Propylbenzene	mg/kg	0.127	0.00	.05	50.7	43-101	L313260-20	WG324363
Naphthalene	mg/kg	0.163	0.00	.05	65.0	33-125	L313260-20	WG324363
p-Isopropyltoluene	mg/kg	0.127	0.00	.05	50.8	34-105	L313260-20	WG324363
sec-Butylbenzene	mg/kg	0.141	0.00	.05	56.5	37-105	L313260-20	WG324363
Styrene	mg/kg	0.149	0.00	.05	59.6	43-107	L313260-20	WG324363
tert-Butylbenzene	mg/kg	0.159	0.00	.05	63.7	45-112	L313260-20	WG324363
Tetrachloroethene	mg/kg	0.104	0.00	.05	41.4	40-114	L313260-20	WG324363
Toluene	mg/kg	0.125	0.00	.05	50.2	54-109	L313260-20	WG324363
trans-1,2-Dichloroethene	mg/kg	0.0958	0.00	.05	38.3	58-118	L313260-20	WG324363
trans-1,3-Dichloropropene	mg/kg	0.137	0.00	.05	54.7	41-107	L313260-20	WG324363
Trichloroethene	mg/kg	0.114	0.00	.05	45.5	56-119	L313260-20	WG324363
Trichlorofluoromethane	mg/kg	0.127	0.00	.05	50.8	39-126	L313260-20	WG324363
Vinyl chloride	mg/kg	0.109	0.00	.05	43.6	39-127	L313260-20	WG324363
Xylenes, Total	mg/kg	0.413	0.00	.15	55.1	51-107	L313260-20	WG324363
1,1,1,2-Tetrachloroethane	mg/kg	0.174	0.00	.05	69.4	56-123	L314215-08	WG324372
1,1,1-Trichloroethane	mg/kg	0.242	0.00	.05	96.8	53-139	L314215-08	WG324372
1,1,2,2-Tetrachloroethane	mg/kg	0.224	0.00	.05	89.6	37-133	L314215-08	WG324372
1,1,2-Trichloroethane	mg/kg	0.226	0.00	.05	90.4	61-113	L314215-08	WG324372
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.302	0.00	.05	121.	56-115	L314215-08	WG324372
1,1-Dichloroethane	mg/kg	0.272	0.00	.05	109.	64-127	L314215-08	WG324372
1,1-Dichloroethene	mg/kg	0.216	0.00	.05	86.3	64-126	L314215-08	WG324372
1,1-Dichloropropene	mg/kg	0.200	0.00	.05	79.9	55-108	L314215-08	WG324372
1,2,3-Trichlorobenzene	mg/kg	0.0923	0.00	.05	36.9	30-113	L314215-08	WG324372
1,2,3-Trichloropropane	mg/kg	0.218	0.00	.05	87.3	47-138	L314215-08	WG324372
1,2,4-Trichlorobenzene	mg/kg	0.0846	0.00	.05	33.8	30-104	L314215-08	WG324372
1,2,4-Trimethylbenzene	mg/kg	0.0985	0.00	.05	39.4	38-108	L314215-08	WG324372



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1,2-Dibromo-3-Chloropropane mg/kg 0.177 0.00 .05 70.7 39-135 L314215-08 WG324372

Analyte	Units	MS Res	Matrix Spike Ref Res	TV	% Rec	Limit	Ref Samp	Batch
1,2-Dibromoethane	mg/kg	0.206	0.00	.05	82.3	57-120	L314215-08	WG324372
1,2-Dichlorobenzene	mg/kg	0.129	0.00	.05	51.5	36-110	L314215-08	WG324372
1,2-Dichloroethane	mg/kg	0.306	0.00	.05	122.	46-147	L314215-08	WG324372
1,2-Dichloropropane	mg/kg	0.238	0.00	.05	95.3	63-124	L314215-08	WG324372
1,3,5-Trimethylbenzene	mg/kg	0.102	0.00	.05	40.7	39-106	L314215-08	WG324372
1,3-Dichlorobenzene	mg/kg	0.0939	0.00	.05	37.0	31-109	L314215-08	WG324372
1,3-Dichloropropane	mg/kg	0.229	0.00	.05	91.6	65-116	L314215-08	WG324372
1,4-Dichlorobenzene	mg/kg	0.105	0.00	.05	41.9	32-102	L314215-08	WG324372
2,2-Dichloropropane	mg/kg	0.226	0.00	.05	90.4	49-138	L314215-08	WG324372
2-Butanone (MEK)	mg/kg	1.18	0.00	.25	94.7	43-137	L314215-08	WG324372
2-Chloroethyl vinyl ether	mg/kg	1.10	0.00	.25	88.0	40-138	L314215-08	WG324372
2-Chlorotoluene	mg/kg	0.115	0.00	.05	46.1	45-111	L314215-08	WG324372
4-Chlorotoluene	mg/kg	0.108	0.00	.05	43.3	38-108	L314215-08	WG324372
4-Methyl-2-pentanone (MIBK)	mg/kg	1.39	0.00	.25	111.	47-133	L314215-08	WG324372
Acetone	mg/kg	1.60	0.00	.25	128.	33-148	L314215-08	WG324372
Acrylonitrile	mg/kg	1.48	0.00	.25	118.	40-126	L314215-08	WG324372
Benzene	mg/kg	0.217	0.00	.05	86.7	54-119	L314215-08	WG324372
Bromobenzene	mg/kg	0.144	0.00	.05	57.6	45-116	L314215-08	WG324372
Bromodichloromethane	mg/kg	0.220	0.00	.05	87.9	51-125	L314215-08	WG324372
Bromoform	mg/kg	0.170	0.00	.05	67.9	44-135	L314215-08	WG324372
Bromomethane	mg/kg	0.337	0.00	.05	135.	30-113	L314215-08	WG324372
Carbon tetrachloride	mg/kg	0.220	0.00	.05	87.9	47-133	L314215-08	WG324372
Chlorobenzene	mg/kg	0.142	0.00	.05	56.8	53-110	L314215-08	WG324372
Chlorodibromomethane	mg/kg	0.191	0.00	.05	76.5	53-125	L314215-08	WG324372
Chloroethane	mg/kg	0.326	0.00	.05	130.	42-149	L314215-08	WG324372
Chloroform	mg/kg	0.248	0.00	.05	99.1	61-127	L314215-08	WG324372
Chloromethane	mg/kg	0.289	0.00	.05	116.	35-140	L314215-08	WG324372
cis-1,2-Dichloroethene	mg/kg	0.238	0.00	.05	95.1	67-120	L314215-08	WG324372
cis-1,3-Dichloropropene	mg/kg	0.200	0.00	.05	79.9	53-113	L314215-08	WG324372
Di-isopropyl ether	mg/kg	0.330	0.00	.05	132.	53-132	L314215-08	WG324372
Dibromomethane	mg/kg	0.254	0.00	.05	102.	57-126	L314215-08	WG324372
Dichlorodifluoromethane	mg/kg	0.287	0.00	.05	115.	34-140	L314215-08	WG324372
Ethylbenzene	mg/kg	0.126	0.00	.05	50.4	47-111	L314215-08	WG324372
Hexachlorobutadiene	mg/kg	0.0508	0.00	.05	20.3	30-91	L314215-08	WG324372
Isopropylbenzene	mg/kg	0.116	0.00	.05	46.3	49-110	L314215-08	WG324372
Methyl tert-butyl ether	mg/kg	0.212	0.00	.05	85.0	63-131	L314215-08	WG324372
Methylene Chloride	mg/kg	0.283	0.0480	.05	94.0	54-123	L314215-08	WG324372
n-Butylbenzene	mg/kg	0.0803	0.00	.05	32.1	36-94	L314215-08	WG324372
n-Propylbenzene	mg/kg	0.0991	0.00	.05	39.6	43-101	L314215-08	WG324372
Naphthalene	mg/kg	0.119	0.00	.05	47.6	33-125	L314215-08	WG324372
p-Isopropyltoluene	mg/kg	0.0748	0.00	.05	29.9	34-105	L314215-08	WG324372
sec-Butylbenzene	mg/kg	0.0863	0.00	.05	34.5	37-105	L314215-08	WG324372
Styrene	mg/kg	0.122	0.00	.05	48.8	43-107	L314215-08	WG324372
tert-Butylbenzene	mg/kg	0.0983	0.00	.05	39.3	45-112	L314215-08	WG324372
Tetrachloroethene	mg/kg	0.109	0.00	.05	43.5	40-114	L314215-08	WG324372
Toluene	mg/kg	0.171	0.00	.05	68.6	54-109	L314215-08	WG324372
trans-1,2-Dichloroethene	mg/kg	0.175	0.00	.05	69.8	58-118	L314215-08	WG324372
trans-1,3-Dichloropropene	mg/kg	0.210	0.00	.05	84.0	41-107	L314215-08	WG324372
Trichloroethene	mg/kg	0.145	0.00	.05	57.8	56-119	L314215-08	WG324372
Trichlorofluoromethane	mg/kg	0.335	0.00	.05	134.	39-126	L314215-08	WG324372
Vinyl chloride	mg/kg	0.282	0.00	.05	113.	39-127	L314215-08	WG324372
Xylenes, Total	mg/kg	0.369	0.00	.15	49.2	51-107	L314215-08	WG324372
1,1,1,2-Tetrachloroethane	mg/l	5.81	0.00	.05	116.	57-133	L312991-02	WG324375
1,1,1-Trichloroethane	mg/l	5.77	0.00	.05	115.	54-143	L312991-02	WG324375
1,1,2,2-Tetrachloroethane	mg/l	5.65	0.00	.05	113.	58-134	L312991-02	WG324375
1,1,2-Trichloroethane	mg/l	5.58	0.00	.05	112.	58-125	L312991-02	WG324375
1,1-Dichloroethane	mg/l	5.64	0.00	.05	113.	53-136	L312991-02	WG324375
1,1-Dichloroethene	mg/l	5.57	0.00	.05	111.	58-145	L312991-02	WG324375



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Quality Assurance Report Level II

Raleigh, NC 27617-7505

L313746

October 08, 2007

1,1-Dichloropropene mg/l 5.47 0.00 .05 109. 58-126 L312991-02 WG324375

Analyte	Units	Matrix Spike			TV	% Rec Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
1,2,3-Trichlorobenzene	mg/l	7.16	0.00	.05	143.	48-127	L312991-02	WG324375
1,2,3-Trichloropropane	mg/l	5.57	0.00	.05	111.	57-145	L312991-02	WG324375
1,2,4-Trichlorobenzene	mg/l	6.48	0.00	.05	130.	41-127	L312991-02	WG324375
1,2,4-Trimethylbenzene	mg/l	7.48	3.29	.05	83.8	52-125	L312991-02	WG324375
1,2-Dibromo-3-Chloropropane	mg/l	5.54	0.00	.05	111.	44-138	L312991-02	WG324375
1,2-Dibromoethane	mg/l	5.33	0.00	.05	107.	64-126	L312991-02	WG324375
1,2-Dichlorobenzene	mg/l	5.00	0.00	.05	100.	50-127	L312991-02	WG324375
1,2-Dichloroethane	mg/l	5.12	0.00	.05	102.	54-145	L312991-02	WG324375
1,2-Dichloropropane	mg/l	5.58	0.00	.05	112.	55-135	L312991-02	WG324375
1,3,5-Trimethylbenzene	mg/l	5.96	0.879	.05	102.	54-125	L312991-02	WG324375
1,3-Dichlorobenzene	mg/l	5.23	0.00	.05	105.	47-128	L312991-02	WG324375
1,3-Dichloropropane	mg/l	5.30	0.00	.05	106.	64-125	L312991-02	WG324375
1,4-Dichlorobenzene	mg/l	4.83	0.0079	.05	96.1	47-123	L312991-02	WG324375
2,2-Dichloropropane	mg/l	4.58	0.00	.05	91.7	44-143	L312991-02	WG324375
2-Butanone (MEK)	mg/l	27.9	0.278	.25	110.	47-133	L312991-02	WG324375
2-Chloroethyl vinyl ether	mg/l	12.8	0.00	.25	51.3	28-148	L312991-02	WG324375
2-Chlorotoluene	mg/l	5.43	0.379	.05	101.	51-135	L312991-02	WG324375
4-Chlorotoluene	mg/l	5.08	0.113	.05	99.4	57-123	L312991-02	WG324375
4-Methyl-2-pentanone (MIBK)	mg/l	29.7	0.00	.25	119.	45-144	L312991-02	WG324375
Acetone	mg/l	25.6	0.568	.25	100.	25-158	L312991-02	WG324375
Acrolein	mg/l	31.1	0.00	.25	124.	25-128	L312991-02	WG324375
Acrylonitrile	mg/l	29.9	0.00	.25	119.	39-136	L312991-02	WG324375
Benzene	mg/l	6.11	0.960	.05	103.	51-134	L312991-02	WG324375
Bromobenzene	mg/l	5.00	0.0253	.05	99.5	60-131	L312991-02	WG324375
Bromodichloromethane	mg/l	5.67	0.00	.05	113.	54-139	L312991-02	WG324375
Bromoform	mg/l	5.74	0.00	.05	115.	52-144	L312991-02	WG324375
Bromomethane	mg/l	4.49	0.0331	.05	89.2	21-131	L312991-02	WG324375
Carbon tetrachloride	mg/l	4.59	0.00	.05	91.7	51-147	L312991-02	WG324375
Chlorobenzene	mg/l	5.43	0.00	.05	109.	59-125	L312991-02	WG324375
Chlorodibromomethane	mg/l	5.57	0.00	.05	111.	57-133	L312991-02	WG324375
Chloroethane	mg/l	4.75	0.00	.05	95.0	38-153	L312991-02	WG324375
Chloroform	mg/l	5.45	0.00	.05	109.	55-133	L312991-02	WG324375
Chloromethane	mg/l	4.30	0.0270	.05	85.5	39-135	L312991-02	WG324375
cis-1,2-Dichloroethene	mg/l	5.63	0.00	.05	113.	64-126	L312991-02	WG324375
cis-1,3-Dichloropropene	mg/l	5.25	0.00	.05	105.	54-122	L312991-02	WG324375
Di-isopropyl ether	mg/l	5.44	0.0560	.05	108.	53-132	L312991-02	WG324375
Dibromomethane	mg/l	5.26	0.00	.05	105.	61-132	L312991-02	WG324375
Dichlorodifluoromethane	mg/l	5.53	0.00	.05	111.	26-153	L312991-02	WG324375
Ethylbenzene	mg/l	6.57	1.20	.05	107.	55-125	L312991-02	WG324375
Hexachlorobutadiene	mg/l	4.98	0.00	.05	99.5	51-109	L312991-02	WG324375
Isopropylbenzene	mg/l	5.53	0.0874	.05	109.	59-127	L312991-02	WG324375
Methyl tert-butyl ether	mg/l	7.11	1.10	.05	120.	50-137	L312991-02	WG324375
Methylene Chloride	mg/l	5.73	0.00	.05	115.	44-143	L312991-02	WG324375
n-Butylbenzene	mg/l	5.01	0.206	.05	96.1	47-124	L312991-02	WG324375
n-Propylbenzene	mg/l	5.61	0.371	.05	105.	53-124	L312991-02	WG324375
Naphthalene	mg/l	7.64	2.30	.05	107.	45-141	L312991-02	WG324375
p-Isopropyltoluene	mg/l	5.59	0.0976	.05	110.	52-126	L312991-02	WG324375
sec-Butylbenzene	mg/l	5.59	0.0367	.05	111.	54-127	L312991-02	WG324375
Styrene	mg/l	5.47	0.0154	.05	109.	55-121	L312991-02	WG324375
tert-Butylbenzene	mg/l	5.64	0.462	.05	104.	57-128	L312991-02	WG324375
Tetrachloroethene	mg/l	5.47	0.00	.05	109.	53-128	L312991-02	WG324375
Toluene	mg/l	9.41	4.40	.05	100.	57-126	L312991-02	WG324375
trans-1,2-Dichloroethene	mg/l	5.69	0.00	.05	114.	52-139	L312991-02	WG324375
trans-1,3-Dichloropropene	mg/l	4.91	0.0527	.05	97.2	48-113	L312991-02	WG324375
Trichloroethene	mg/l	5.68	0.00	.05	114.	57-135	L312991-02	WG324375
Trichlorofluoromethane	mg/l	5.25	0.00	.05	105.	42-134	L312991-02	WG324375
Vinyl chloride	mg/l	5.04	0.00	.05	101.	44-132	L312991-02	WG324375
Xylenes, Total	mg/l	22.1	7.00	.15	100.	54-129	L312991-02	WG324375



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Analyte	Matrix Spike Duplicate				RPD	Limit	%Rec	Ref Samp	Batch
	Units	MSD	Res	Ref Res					
1,1,1,2-Tetrachloroethane	mg/kg	0.198	0.180	9.50	18	79.4	L313260-20	WG324363	
1,1,1-Trichloroethane	mg/kg	0.147	0.133	10.0	17	58.7	L313260-20	WG324363	
1,1,2,2-Tetrachloroethane	mg/kg	0.221	0.185	17.9	14	88.4	L313260-20	WG324363	
1,1,2-Trichloroethane	mg/kg	0.196	0.169	15.1	19	78.4	L313260-20	WG324363	
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.120	0.107	11.6	20	48.0	L313260-20	WG324363	
1,1-Dichloroethane	mg/kg	0.142	0.133	6.37	16	56.9	L313260-20	WG324363	
1,1-Dichloroethane	mg/kg	0.112	0.101	8.22	20	44.2	L313260-20	WG324363	
1,1-Dichloropropene	mg/kg	0.113	0.104	8.72	21	45.4	L313260-20	WG324363	
1,2,3-Trichlorobenzene	mg/kg	0.157	0.136	14.4	23	62.7	L313260-20	WG324363	
1,2,3-Trichloropropane	mg/kg	0.235	0.193	19.9	16	94.2	L313260-20	WG324363	
1,2,4-Trichlorobenzene	mg/kg	0.118	0.106	9.92	24	47.0	L313260-20	WG324363	
1,2,4-Trimethylbenzene	mg/kg	0.155	0.134	14.5	23	61.9	L313260-20	WG324363	
1,2-Dibromo-3-Chloropropane	mg/kg	0.215	0.196	9.44	24	56.1	L313260-20	WG324363	
1,2-Dibromoethane	mg/kg	0.184	0.166	10.6	16	73.7	L313260-20	WG324363	
1,2-Dichlorobenzene	mg/kg	0.170	0.156	9.12	19	69.2	L313260-20	WG324363	
1,2-Dichloroethane	mg/kg	0.155	0.140	10.1	14	62.1	L313260-20	WG324363	
1,2-Dichloropropane	mg/kg	0.170	0.156	8.72	16	68.1	L313260-20	WG324363	
1,3,5-Trimethylbenzene	mg/kg	0.157	0.133	16.3	19	62.7	L313260-20	WG324363	
1,3-Dichlorobenzene	mg/kg	0.150	0.131	13.7	18	60.0	L313260-20	WG324363	
1,3-Dichloropropane	mg/kg	0.189	0.166	12.6	16	75.5	L313260-20	WG324363	
1,4-Dichlorobenzene	mg/kg	0.143	0.130	9.53	18	57.2	L313260-20	WG324363	
2,2-Dichloropropane	mg/kg	0.128	0.116	10.1	18	51.1	L313260-20	WG324363	
2-Butanone (MEK)	mg/kg	0.726	0.624	15.2	21	58.1	L313260-20	WG324363	
2-Chloroethyl vinyl ether	mg/kg	0.617	0.563	9.24	13	49.4	L313260-20	WG324363	
2-Chlorotoluene	mg/kg	0.165	0.144	13.8	20	66.1	L313260-20	WG324363	
4-Chlorotoluene	mg/kg	0.148	0.127	15.0	19	59.2	L313260-20	WG324363	
4-Methyl-2-pentanone (MIBK)	mg/kg	0.967	0.810	17.7	20	77.4	L313260-20	WG324363	
Acetone	mg/kg	0.825	0.742	10.6	23	66.0	L313260-20	WG324363	
Acrylonitrile	mg/kg	0.863	0.779	10.2	20	69.1	L313260-20	WG324363	
Benzene	mg/kg	0.128	0.122	5.35	15	51.3	L313260-20	WG324363	
Bromobenzene	mg/kg	0.182	0.155	16.0	19	72.8	L313260-20	WG324363	
Bromodichloromethane	mg/kg	0.174	0.163	6.31	15	69.5	L313260-20	WG324363	
Bromoform	mg/kg	0.227	0.200	12.8	21	90.8	L313260-20	WG324363	
Bromomethane	mg/kg	0.130	0.129	0.468	30	52.0	L313260-20	WG324363	
Carbon tetrachloride	mg/kg	0.137	0.121	12.2	22	54.6	L313260-20	WG324363	
Chlorobenzene	mg/kg	0.167	0.146	13.2	22	66.8	L313260-20	WG324363	
Chlorodibromomethane	mg/kg	0.205	0.183	11.4	17	82.0	L313260-20	WG324363	
Chloroethane	mg/kg	0.135	0.123	9.15	28	54.1	L313260-20	WG324363	
Chloroform	mg/kg	0.152	0.145	4.67	14	60.7	L313260-20	WG324363	
Chloromethane	mg/kg	0.118	0.113	4.49	19	47.4	L313260-20	WG324363	
cis-1,2-Dichloroethene	mg/kg	0.140	0.136	3.44	12	56.2	L313260-20	WG324363	
cis-1,3-Dichloropropene	mg/kg	0.151	0.136	10.3	16	60.4	L313260-20	WG324363	
Di-isopropyl ether	mg/kg	0.170	0.155	9.36	20	67.9	L313260-20	WG324363	
Dibromomethane	mg/kg	0.157	0.149	5.70	16	62.9	L313260-20	WG324363	
Dichlorodifluoromethane	mg/kg	0.121	0.103	16.3	22	48.5	L313260-20	WG324363	
Ethylbenzene	mg/kg	0.152	0.139	9.15	20	60.7	L313260-20	WG324363	
Hexachlorobutadiene	mg/kg	0.129	0.120	7.24	22	51.6	L313260-20	WG324363	
Isopropylbenzene	mg/kg	0.173	0.144	18.2	20	69.2	L313260-20	WG324363	
Methyl tert-butyl ether	mg/kg	0.167	0.156	6.83	13	66.7	L313260-20	WG324363	
Methylene Chloride	mg/kg	0.163	0.147	10.1	16	53.2	L313260-20	WG324363	
n-Butylbenzene	mg/kg	0.128	0.113	12.7	22	51.1	L313260-20	WG324363	
n-Propylbenzene	mg/kg	0.153	0.127	18.7	19	61.2	L313260-20	WG324363	
Naphthalene	mg/kg	0.192	0.163	16.8	22	77.0	L313260-20	WG324363	
p-Isopropyltoluene	mg/kg	0.154	0.127	19.3	21	61.6	L313260-20	WG324363	
sec-Butylbenzene	mg/kg	0.171	0.141	19.0	21	68.3	L313260-20	WG324363	
Styrene	mg/kg	0.169	0.149	12.5	23	67.6	L313260-20	WG324363	
tert-Butylbenzene	mg/kg	0.188	0.159	16.6	21	75.2	L313260-20	WG324363	
Tetrachloroethene	mg/kg	0.120	0.104	14.4	21	47.8	L313260-20	WG324363	
Toluene	mg/kg	0.141	0.125	12.0	19	56.6	L313260-20	WG324363	
trans-1,2-Dichloroethene	mg/kg	0.102	0.0958	5.92	20	40.6	L313260-20	WG324363	



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trans-1,3-Dichloropropene mg/kg 0.154 0.137 12.1 16 61.8 L313260-20 WG324363

Analyte	Matrix Spike Duplicate					Limit	%Rec	Ref Samp	Batch
	Units	MSD Res	Ref Res	RPD					
Trichloroethene	mg/kg	0.127	0.114	11.3	18	50.9	L313260-20	WG324363	
Trichlorofluoromethane	mg/kg	0.139	0.127	8.89	21	55.6	L313260-20	WG324363	
Vinyl chloride	mg/kg	0.121	0.109	10.2	24	48.2	L313260-20	WG324363	
Xylenes, Total	mg/kg	0.469	0.413	12.6	19	62.5	L313260-20	WG324363	
1,1,1,2-Tetrachloroethane	mg/kg	0.151	0.174	13.7	18	60.5	L314215-08	WG324372	
1,1,1-Trichloroethane	mg/kg	0.215	0.242	11.8	17	86.0	L314215-08	WG324372	
1,1,2,2-Tetrachloroethane	mg/kg	0.207	0.224	7.88	14	82.8	L314215-08	WG324372	
1,1,2-Trichloroethane	mg/kg	0.207	0.226	8.66	19	82.9	L314215-08	WG324372	
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.296	0.302	2.08	20	118.	L314215-08	WG324372	
1,1-Dichloroethane	mg/kg	0.250	0.272	8.59	16	99.9	L314215-08	WG324372	
1,1-Dichloroethene	mg/kg	0.201	0.216	7.23	20	80.3	L314215-08	WG324372	
1,1-Dichloropropene	mg/kg	0.170	0.200	14.6	21	60.1	L314215-08	WG324372	
1,2,3-Trichlorobenzene	mg/kg	0.0879	0.0923	4.85	23	35.2	L314215-08	WG324372	
1,2,3-Trichloropropane	mg/kg	0.203	0.218	7.11	16	81.3	L314215-08	WG324372	
1,2,4-Trichlorobenzene	mg/kg	0.0803	0.0846	5.12	24	32.1	L314215-08	WG324372	
1,2,4-Trimethylbenzene	mg/kg	0.0845	0.0985	15.4	23	33.8	L314215-08	WG324372	
1,2-Dibromo-3-Chloropropane	mg/kg	0.166	0.177	6.16	24	66.5	L314215-08	WG324372	
1,2-Dibromoethane	mg/kg	0.185	0.206	10.8	16	73.8	L314215-08	WG324372	
1,2-Dichlorobenzene	mg/kg	0.119	0.129	8.18	19	47.4	L314215-08	WG324372	
1,2-Dichloroethane	mg/kg	0.284	0.306	7.51	14	113.	L314215-08	WG324372	
1,2-Dichloropropane	mg/kg	0.213	0.238	11.4	16	85.1	L314215-08	WG324372	
1,3,5-Trimethylbenzene	mg/kg	0.0846	0.102	18.4	19	33.9	L314215-08	WG324372	
1,3-Dichlorobenzene	mg/kg	0.0838	0.0939	11.4	18	33.5	L314215-08	WG324372	
1,3-Dichloropropane	mg/kg	0.208	0.229	9.48	16	83.3	L314215-08	WG324372	
1,4-Dichlorobenzene	mg/kg	0.0974	0.105	7.21	18	38.9	L314215-08	WG324372	
2,2-Dichloropropane	mg/kg	0.210	0.226	7.45	18	83.9	L314215-08	WG324372	
2-Butanone (MEK)	mg/kg	1.10	1.18	7.67	21	87.7	L314215-08	WG324372	
2-Chloroethyl vinyl ether	mg/kg	0.972	1.10	12.4	13	77.7	L314215-08	WG324372	
2-Chlorotoluene	mg/kg	0.0964	0.115	17.7	20	38.6	L314215-08	WG324372	
4-Chlorotoluene	mg/kg	0.0934	0.108	14.6	19	37.4	L314215-08	WG324372	
4-Methyl-2-pentanone (MIBK)	mg/kg	1.28	1.39	7.91	20	102.	L314215-08	WG324372	
Acetone	mg/kg	1.45	1.60	9.82	23	116.	L314215-08	WG324372	
Acrylonitrile	mg/kg	1.30	1.48	12.4	20	104.	L314215-08	WG324372	
Benzene	mg/kg	0.192	0.217	12.3	15	76.7	L314215-08	WG324372	
Bromobenzene	mg/kg	0.125	0.144	13.8	19	50.1	L314215-08	WG324372	
Bromodichloromethane	mg/kg	0.199	0.220	9.91	15	79.6	L314215-08	WG324372	
Bromoform	mg/kg	0.157	0.170	8.01	21	62.6	L314215-08	WG324372	
Bromomethane	mg/kg	0.327	0.337	3.07	30	131.	L314215-08	WG324372	
Carbon tetrachloride	mg/kg	0.199	0.220	10.1	22	79.4	L314215-08	WG324372	
Chlorobenzene	mg/kg	0.120	0.142	16.6	22	48.1	L314215-08	WG324372	
Chlorodibromomethane	mg/kg	0.174	0.191	9.42	17	69.7	L314215-08	WG324372	
Chloroethane	mg/kg	0.300	0.326	8.21	28	120.	L314215-08	WG324372	
Chloroform	mg/kg	0.226	0.248	8.98	14	90.5	L314215-08	WG324372	
Chloromethane	mg/kg	0.271	0.289	6.63	19	108.	L314215-08	WG324372	
cis-1,2-Dichloroethene	mg/kg	0.214	0.238	10.7	12	85.4	L314215-08	WG324372	
cis-1,3-Dichloropropene	mg/kg	0.174	0.200	13.8	16	69.6	L314215-08	WG324372	
Di-isopropyl ether	mg/kg	0.308	0.330	6.96	20	123.	L314215-08	WG324372	
Dibromomethane	mg/kg	0.232	0.254	8.81	16	93.0	L314215-08	WG324372	
Dichlorodifluoromethane	mg/kg	0.289	0.287	0.680	22	115.	L314215-08	WG324372	
Ethylbenzene	mg/kg	0.101	0.126	21.8	20	40.5	L314215-08	WG324372	
Hexachlorobutadiene	mg/kg	0.0448	0.0508	12.5	22	17.9	L314215-08	WG324372	
Isopropylbenzene	mg/kg	0.0911	0.116	23.8	20	36.4	L314215-08	WG324372	
Methyl tert-butyl ether	mg/kg	0.197	0.212	7.29	13	79.0	L314215-08	WG324372	
Methylene Chloride	mg/kg	0.259	0.283	9.02	16	84.2	L314215-08	WG324372	
n-Butylbenzene	mg/kg	0.0686	0.0803	15.6	22	27.4	L314215-08	WG324372	
n-Propylbenzene	mg/kg	0.0800	0.0991	21.4	19	32.0	L314215-08	WG324372	
Naphthalene	mg/kg	0.114	0.119	4.19	22	45.7	L314215-08	WG324372	
p-Isopropyltoluene	mg/kg	0.0607	0.0748	20.7	21	24.3	L314215-08	WG324372	



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Raleigh, NC 27617-7505

L313746

October 08, 2007

sec-Butylbenzene mg/kg 0.0685 0.0863 23.1 21 27.4 L314215-08 WG324372

Analyte	Matrix Spike Duplicate				RPD	Limit	%Rec	Ref Samp	Batch
	Units	MSD	Res	Ref Res					
Styrene	mg/kg	0.106	0.122	13.9	23	42.4	L314215-08	WG324372	
tert-Butylbenzene	mg/kg	0.0772	0.0983	24.0	21	30.9	L314215-08	WG324372	
Tetrachloroethene	mg/kg	0.0873	0.109	21.8	21	34.9	L314215-08	WG324372	
Toluene	mg/kg	0.144	0.171	17.2	19	57.7	L314215-08	WG324372	
trans-1,2-Dichloroethene	mg/kg	0.156	0.175	11.0	20	62.5	L314215-08	WG324372	
trans-1,3-Dichloropropene	mg/kg	0.183	0.210	13.7	10	73.2	L314215-08	WG324372	
Trichloroethene	mg/kg	0.122	0.145	16.5	18	49.0	L314215-08	WG324372	
Trichlorofluoromethane	mg/kg	0.318	0.335	5.24	21	127.	L314215-08	WG324372	
Vinyl chloride	mg/kg	0.263	0.282	7.15	24	105.	L314215-08	WG324372	
Xylenes, Total	mg/kg	0.298	0.369	21.3	19	39.7	L314215-08	WG324372	
1,1,1,2-Tetrachloroethane	mg/l	5.82	5.81	0.256	21	116.	L312991-02	WG324375	
1,1,1-Trichloroethane	mg/l	5.63	5.77	2.45	22	113.	L312991-02	WG324375	
1,1,2,2-Tetrachloroethane	mg/l	5.60	5.65	0.270	27	113.	L312991-02	WG324375	
1,1,2-Trichloroethane	mg/l	5.57	5.58	0.293	19	111.	L312991-02	WG324375	
1,1-Dichloroethane	mg/l	5.54	5.64	1.80	22	111.	L312991-02	WG324375	
1,1-Dichloroethene	mg/l	5.49	5.57	1.32	22	110.	L312991-02	WG324375	
1,1-Dichloropropene	mg/l	5.35	5.47	2.31	20	107.	L312991-02	WG324375	
1,2,3-Trichlorobenzene	mg/l	7.51	7.16	4.79	26	150.	L312991-02	WG324375	
1,2,3-Trichloropropane	mg/l	5.54	5.57	0.535	24	111.	L312991-02	WG324375	
1,2,4-Trichlorobenzene	mg/l	6.55	6.48	0.991	26	131.	L312991-02	WG324375	
1,2,4-Trimethylbenzene	mg/l	7.43	7.48	0.696	26	82.7	L312991-02	WG324375	
1,2-Dibromo-3-Chloropropane	mg/l	5.67	5.54	2.38	27	113.	L312991-02	WG324375	
1,2-Dibromoethane	mg/l	5.34	5.33	0.205	19	107.	L312991-02	WG324375	
1,2-Dichlorobenzene	mg/l	5.04	5.00	0.899	19	101.	L312991-02	WG324375	
1,2-Dichloroethane	mg/l	4.98	5.12	2.83	21	99.6	L312991-02	WG324375	
1,2-Dichloropropane	mg/l	5.43	5.58	2.76	20	109.	L312991-02	WG324375	
1,3,5-Trimethylbenzene	mg/l	5.94	5.96	0.346	27	101.	L312991-02	WG324375	
1,3-Dichlorobenzene	mg/l	5.28	5.23	0.912	25	106.	L312991-02	WG324375	
1,3-Dichloropropane	mg/l	5.23	5.30	1.40	19	105.	L312991-02	WG324375	
1,4-Dichlorobenzene	mg/l	4.85	4.83	0.398	18	96.8	L312991-02	WG324375	
2,2-Dichloropropane	mg/l	4.46	4.58	2.63	19	89.3	L312991-02	WG324375	
2-Butanone (MEK)	mg/l	26.2	27.9	6.24	22	104.	L312991-02	WG324375	
2-Chloroethyl vinyl ether	mg/l	12.8	12.8	0.0760	18	51.4	L312991-02	WG324375	
2-Chlorotoluene	mg/l	5.42	5.43	0.236	28	101.	L312991-02	WG324375	
4-Chlorotoluene	mg/l	5.12	5.08	0.694	25	100.	L312991-02	WG324375	
4-Methyl-2-pentanone (MIBK)	mg/l	28.9	29.7	2.74	25	116.	L312991-02	WG324375	
Acetone	mg/l	24.5	25.6	4.18	33	95.8	L312991-02	WG324375	
Acrolein	mg/l	30.5	31.1	1.85	15	122.	L312991-02	WG324375	
Acrylonitrile	mg/l	29.1	29.9	2.60	25	116.	L312991-02	WG324375	
Benzene	mg/l	6.07	6.11	0.657	18	102.	L312991-02	WG324375	
Bromobenzene	mg/l	5.06	5.00	1.18	22	101.	L312991-02	WG324375	
Bromodichloromethane	mg/l	5.64	5.67	0.617	19	113.	L312991-02	WG324375	
Bromoform	mg/l	5.83	5.74	1.57	21	117.	L312991-02	WG324375	
Bromomethane	mg/l	4.64	4.49	3.27	24	92.2	L312991-02	WG324375	
Carbon tetrachloride	mg/l	4.87	4.59	6.06	23	97.5	L312991-02	WG324375	
Chlorobenzene	mg/l	5.40	5.43	0.520	22	108.	L312991-02	WG324375	
Chlorodibromomethane	mg/l	5.56	5.57	0.128	19	111.	L312991-02	WG324375	
Chloroethane	mg/l	4.65	4.75	2.13	25	93.0	L312991-02	WG324375	
Chloroform	mg/l	5.32	5.45	2.36	20	106.	L312991-02	WG324375	
Chloromethane	mg/l	4.64	4.30	7.54	23	92.2	L312991-02	WG324375	
cis-1,2-Dichloroethene	mg/l	5.73	5.63	1.83	18	115.	L312991-02	WG324375	
cis-1,3-Dichloropropene	mg/l	5.18	5.25	1.31	22	104.	L312991-02	WG324375	
Di-isopropyl ether	mg/l	5.40	5.44	0.808	20	107.	L312991-02	WG324375	
Dibromomethane	mg/l	5.11	5.26	2.89	19	102.	L312991-02	WG324375	
Dichlorodifluoromethane	mg/l	5.27	5.53	4.76	25	105.	L312991-02	WG324375	
Ethylbenzene	mg/l	6.50	6.57	1.04	20	106.	L312991-02	WG324375	
Hexachlorobutadiene	mg/l	4.94	4.98	0.766	22	98.8	L312991-02	WG324375	
Isopropylbenzene	mg/l	5.48	5.53	1.00	26	108.	L312991-02	WG324375	



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October 08, 2007

Methyl tert-butyl ether mg/l 6.93 7.11 2.56 21 117. L312991-02 WG324375

Analyte	Matrix Spike Duplicate				RPD	Limit	%Rec	Ref Samp	Batch
	Units	MSD Res	Ref Res	Ref Res					
Methylene Chloride	mg/l	5.63	5.73		1.82	22	113.	L312991-02	WG324375
n-Butylbenzene	mg/l	5.01	5.01		0.0579	20	96.1	L312991-02	WG324375
n-Propylbenzene	mg/l	5.59	5.61		0.451	26	104.	L312991-02	WG324375
Naphthalene	mg/l	7.92	7.64		3.56	25	112.	L312991-02	WG324375
p-Isopropyltoluene	mg/l	5.42	5.59		0.557	20	110.	L312991-02	WG324375
sec-Butylbenzene	mg/l	5.60	5.59		1.32	20	110.	L312991-02	WG324375
Styrene	mg/l	5.49	5.47		0.383	27	109.	L312991-02	WG324375
tert-Butylbenzene	mg/l	5.54	5.64		1.69	26	102.	L312991-02	WG324375
Tetrachloroethene	mg/l	5.38	5.47		1.81	24	108.	L312991-02	WG324375
Toluene	mg/l	9.19	9.41		2.36	26	95.8	L312991-02	WG324375
trans-1,2-Dichloroethene	mg/l	5.43	5.69		4.61	24	109.	L312991-02	WG324375
trans-1,3-Dichloropropene	mg/l	4.84	4.01		1.45	22	95.8	L312991-02	WG324375
Trichloroethene	mg/l	5.62	5.83		1.19	23	112.	L312991-02	WG324375
Trichlorofluoromethane	mg/l	5.13	5.25		2.41	21	103.	L312991-02	WG324375
Vinyl chloride	mg/l	5.13	5.04		1.75	24	103.	L312991-02	WG324375
Xylenes, Total	mg/l	22.0	22.1		0.333	24	100.	L312991-02	WG324375

Batch number /Run number / Sample number cross reference

WG323933: R336647: L313746-01 02 03 04 05 06 07 08 09 10
WG323934: R336648: L313746-11 12 13 14 15 16 17 18 23 24
WG323935: R336649: L313746-25 26 27 28
WG324363: R336868: L313746-02 03 04 06 07 08 09 24
WG324372: R336895: L313746-01 11 13 14 15 16 17 18 23
WG324375: R336940: L313746-19 20 21 22 29 30
WG324468: R336974: L313746-04 05 09 10 11 12 25 26 27 28

* * Calculations are performed prior to rounding of reported values .



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The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

APPENDIX B



ECS CAROLINAS, LLP

Geotechnical • Construction Materials • Environmental

Mr. Darryl Rennells
KB Home, Raleigh-Durham Inc.
2610 Wycliff Road
Suite 102
Raleigh, North Carolina 27607

October 15, 2007

Mr. Travis Cope
Senior Regional Counsel
KB Home
10990 Wilshire Blvd (7th Floor)
Los Angeles, CA 90024

Reference: Report of Indoor Air Quality Assessment
223 Rope Walk Drive
Morrisville, North Carolina
ECS Carolinas, LLP Project 06.15416

Dear Mr. Rennells and Mr. Cope:

ECS Carolinas, LLP (ECS) is pleased to provide KB Home with the results of the indoor air quality assessment for the above-referenced project. Our services were provided as proposed in ECS Proposal No. 06-11478 dated September 28, 2007.

This report presents results of an Indoor Air Quality Assessment (IAQA) conducted at 223 Rope Walk Court located in Morrisville, North Carolina. An initial walk-thru observation and sampling was conducted on October 4, 2007. The work was performed in order to determine the levels of total Volatile Organic Compounds (VOC) in particular xylene and ethylbenzene within the single-family residence. ECS was asked to set up two TO-15 canister and collect data for volatile organic compounds to see if odors from the use of xylene on the driveway had migrated into the house. This was due to odors reported inside the residence and has been occurring for several weeks.

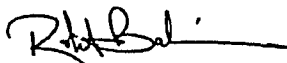
Testing was performed in accordance with general guidelines provided in EPA Method 1P-1B. The acceptance criteria were adopted from relevant industry standards. The maximum level of VOC for buildings defined as construction completed more than 6 months prior to sampling is 200 micrograms per cubic meter (ug/m³) of air. Results are provided in the attached table.

Results of the testing revealed that the samples taken inside were elevated above the 200 ug/m³ limit, with several gasoline by-products, ethanol and acetone. The outside levels were not greater than the 200 ug/m³ limit.

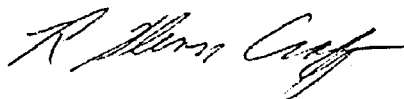
Refer to the section "Results" for a tabulated summary of data and Appendix "A" for data sheets for each sample. The deficiencies are described in the section titled "Conclusions and Recommendations" below.

The data presented in this report is indicative of the site at the time and date tested. If you have any questions please do not hesitate to call us at (919) 861-9910.

Sincerely,
ECS Carolinas, LLP



Rohit Bali, CMR, CIE
Industrial Hygiene Section Manager



R. Glenn Craig, P.E.
Vice President/Branch Manager

**INDOOR AIR QUALITY ASSESSMENT
KNICHEL RESIDENCE
223 ROPE WALK COURT
MORRISVILLE, NORTH CAROLINA**

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1.0 Project Information

An indoor air quality assessment was conducted for KB Home Raleigh-Durham (KB Home) at 223 Rope Walk Court in Morrisville, North Carolina. This is a currently occupied single-family residence. ECS personnel were asked to conduct air sampling services due to odors apparently detected by Ms. Stephanie Knichel (resident), noted strong suspect odors on September 18th and 19th, 2007 after the concrete driveway was sealed by KB Home contractors. The resident had an odor concern due to elevated odors in the residence that were present.

2.0 Scope of Services

The survey was performed on October 4, 2007 by Rohit Bali, Industrial Hygiene Manager of ECS Carolinas, LLP (ECS). The purpose of the assessment was to identify the level of odors within the residence due to the use of the product in the driveway. The house has a typical 2-3 ton HVAC system with a gas fired system which was not operating during these tests. This was done as the cleaning product was released into the soil going toward the backyard. The sampling was conducted in general accordance with the NIOSH Method TO-15. Results are compared to applicable Environmental Protection Agency (EPA) and European Government recommendations concerning indoor VOC concentrations.

In addition, typical indoor environmental parameters were evaluated during the October 4, 2007 survey. These parameters include temperature, relative humidity, carbon monoxide (CO), and Carbon Dioxide (CO₂). Indoor air quality parameters are then compared to those levels outside. Several methods are available for evaluating this information. Currently ECS evaluates Carbon Dioxide by taking those levels observed outside (in parts per million) plus 800 ppm. Routinely, the maximum indoor level desired ranges from approximately 1,000 – 1,100 ppm. Based upon the findings of the October 4, 2007 survey, the maximum acceptable CO₂ level indoors was calculated to be 680 ppm

ECS also compares temperature and relative humidity levels to those recommended by the American Society of Heating, Refrigeration and Air-conditioning Engineers (ASHRAE). The recommendations for temperature and humidity are based on seasonal and regional influences to allow comfort of 80% of a building's population; however it is recommended that indoor relative humidity levels range between 30%-60% with 50 % being optimal.

The Environmental Protection Agency has recommended a maximum recommended indoor level of Carbon monoxide of 9.0 ppm. All detectable levels of carbon monoxide are reported as 2.4 ppm or less throughout the indoors.

Airborne VOC samples were collected in the complaint area of the house, using a time calibrated regulator. Samples were collected on evacuated canisters, from four to seven feet above the floor, for eight hours. Analysis was conducted by EMSL Analytical Laboratories, located in Weston, New Jersey using NIOSH Method TO-15 (Gas Chromatography/Mass Spectrometry) (VOC). Results are reported as total VOC's. Results are compared to applicable EPA and European Government recommendations concerning indoor VOC concentrations.

All pumps utilized were calibrated prior to and after sampling. Sample data were entered on chain of custody forms, and shipped overnight, on blue ice, as appropriate, via Federal Express, or hand delivered to the laboratory. Copies of the all Field Sample Data Sheets, Chain of Custody Forms, and laboratory reports are attached in the Appendix.

3.0 Recommended Criteria

The complaint areas were chosen for testing on October 4, 2007. The first sample indoors was located in the kitchen and found to contain detectable levels of VOC's. The second sample indoors was located in the garage and found to contain detectable levels of VOC's. The samples ran for approximately 480 minutes which is required to achieve the desired Limit of Detection (LOD). The following is a list of elevated compounds that were detected. Please see Appendix I for the complete list of compounds.

The criteria for VOC levels collected must be less than 500 ug/m³ of air for new buildings (defined as construction completed less than 6 months prior to sampling). For other than new buildings, to meet the performance specification for success, each VOC sample collected must be less than 200 ug/m³ of air in the breathable air of space.

Elevated VOC levels indoor, is not characteristic of well-operated and maintained buildings (Patty's Industrial Hygiene, Fifth Edition, Volume 4, p. 3165). Patty goes on to report (p. 3167) that occupant complaints are almost always encountered when TVOC levels are 3,000 ug/m³ or higher. At TVOC levels of 200 – 3,000 ug/m³ occupant discomfort and irritation complaints are manifested if other exposures occur simultaneously. At levels below 200 ug/m³ discomfort and complaints due to VOC's should be minimal. However, the dose-response relationship is negated when highly odorous VOC's are present in indoor air. In other words, even low concentrations of these VOC's can elicit complaints. Patty also reports that most buildings have TVOC levels in the 50 –200 ug/m³ range (p. 3168). While TVOC is one overall indicator, most professionals do not use it as the sole indicator of Indoor Air Quality (IAQ) problems. Rather, a thorough analysis of the distribution and rank order of individual VOC's is more fruitful in determining the relationship of and solutions for building related symptoms.

Several guidelines for TVOC in indoor air have been developed. The European Collaborative Action (ECA) Report 11, titled Guidelines for Ventilation Requirements in Buildings (CEC, 1992) lists the following TVOC concentration ranges:

1. Comfort Range	<200 ug/m ³
2. Multifactorial Exposure Range	200-3,000 ug/m ³
3. Discomfort Range	3,000-25,000 ug/m ³
4. Toxic Range	>25,000 ug/m ³

In 1989 the State of Washington developed indoor air quality specifications for new office buildings. These specifications require that emissions from products and building materials result in an indoor air concentration of TVOC no higher than 500 ug/m³. The US EPA has recently instituted project specifications for new buildings that will also limit building air concentration of TVOC to levels no greater than 500 ug/m³.

Health effects of VOC's at these levels are highly controversial. Occupational exposure limits (OEL's), where they exist, are generally developed for exposures an order of magnitude above those encountered in typical indoor air situations. A quick literature search of the predominant VOC's found in the air samples indicated that most were skin, eye, and respiratory irritants at some level. None were found to be listed as suspect carcinogens by the National Toxicology Program. As indicated in the European guidelines, VOC concentrations at these levels are not considered acutely toxic for most of the population. However, it has been demonstrated, as

reported in Patty, that significant symptoms can appear in employee populations at these concentrations, depending on the individual circumstances of the situation.

The indoor total VOC levels observed in the sample exceeded recommended thresholds discussed above.

All total VOC samples were analyzed to qualitative VOC's using a TO-15 evacuated canister over an 8 hour period. Results are presented in the Tables and Laboratory Reports contained in the Appendix. It should be noted that low level VOC's may be emitted from a wide range of sources including furniture, carpet, paint, adhesives, printer and copier emissions, electrical and computer burn off, etc, or transient sources ranging from cough drop flavoring to personal care, grooming, and facility cleaning products.

Every effort has been made to provide a complete evaluation as professionally practical. However, inherent constraints of time, observation, and scope of work must be recognized. Observations, findings, results and conclusions are based upon observations at the facility and results of analyses of the samples obtained during the assessment. The findings are representative of conditions apparent at the time and not necessarily indicative of previous or current conditions. Management should assess and analyze each thought in relation to available resources, objectives and activities. This report is intended for the exclusive use of McCar Homes and shall not be relied upon by any other parties without prior written consent of ECS Carolinas, LLP.

4.0 Conclusions and Recommendations

The relative humidity levels found 56% were between 53%- 57% and the temperature was 73.8°F between the recommended temperatures of 71°F - 74°F for the Carolinas. Recommended temperature levels will differ depending on region, season, and humidity levels. Survey findings are summarized in Table 1 (below).

Table 1: Indoor Air Quality Parameters

Location	CO² (ppm)	CO (ppm)	T°F	RH%
Kitchen	680	2.4	731.8	56
Outside Air	479	1.2	83.6	68

The following table lists some of the elevated VOC's that were in the indoor sample:

Table 2: Abbreviated Sampling Results (Indoor Sample)

Location	VOC Results
Kitchen	ug/m3
Ethanol	1800
Acetone	710
Benzene	41 J
Toluene	210
Ethylbenzene	110 J
Xylene (para and meta)	550
Xylene (ortho)	110 J

Location	VOC Results
Garage	ug/m3
Ethanol	2700
Benzene	70 J
Toluene	340
Ethylbenzene	200
Xylene (para and meta)	1300
Xylene (ortho)	260

J- detected below practical quantitation level, but above the MDL

Based on an analysis of the sampling results, indoor air quality within the residence appears to be elevated (higher than normal). During the site walk-thru no visible source was determined for the odors. In order to further assess this issue we recommend additional attention as follows:

- Determine if the cleaning product is under the concrete slab. The elevated levels will need to be ventilated/mitigated so that they do not come in through the concrete slab.
- There is gasoline storage on site that is contributing to the odor threshold. The elevated levels of gasoline by-products suggest that a source of gasoline may have contributed to the odors.
- ECS recommends reducing the levels of odors by ventilating the home with a minimum of 10 air exchanges per hour or heat (above 100°F) the residence to evaporate the organic compounds. ECS recommends that the residence be unoccupied during this work. The residence should be retested after the remediation method is implemented.

ECS can provide a structural engineer to develop a mitigation and/or ventilation plan if the vapors are determined to be under the concrete slab.

APPENDIX I

Sampling Results



EMSL Analytical, Inc., TO-15 Laboratory, 3 Cooper Street, Westmont, NJ 08108 phone (800)220-3675

October 7, 2007

Rohit Bali
ECS Carolinas, LLP
9001 Glenwood Avenue
Raleigh, NC 27617

Email: rbali@ecslimited.com

RE: EMSL 280701781

Project: 15416

TO-15 ANALYSIS

Dear Rohit:

Attached please find the lab report and results for the above referenced analysis. If you have any questions or need further information please do not hesitate to contact me at extension 1275. If you require data interpretation, please contact Vince Daliessio, CIH, at extension 1240.

Sincerely,

Scott VanEtten
Senior Chemist
IH Laboratory Manager

NJ-NELAP Laboratory No. 04653

VOLATILE ORGANICS DATA ANALYSIS SUMMARY
EPA COMPENDIUM TO-15

Lab Name: EMSL ANALYTICAL
Lab City: WESTMONT, NJ
Instrument ID: 5973-VOA#2
GC Column: RTX-502.2 60m 0.25mm 1.4u
Acquisition Method: 092707TK.M
Calibration Date: 9/27/07
Matrix: Air
Latest MDL Date: 6/29 & 7/6/07
Analyst: MTH

Air Results for Project: 15416
Field ID Number: Inside House-Kitchen
Laboratory ID Number: 280701781-1
Sampling Date: 10/4/07
Lab File ID: k7199.d
Analysis Date: 10/08/07
Time Acquired: 7:12am
Sample Volume(mL): 5
Dilution Factor: 50
Can ID: T2196

Compound	CAS Number	Molecular Weight	Results ppbv	Q	Results ug/m3	
Propylene	115-07-1	42	50	U	86	
Freon 12(Dichlorodifluoromethane)	75-71-8	121	25	U	120	
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	171	25	U	170	
Chloromethane	74-87-3	50	25	U	52	
Vinyl chloride	75-01-4	63	25	U	64	
1,3-Butadiene	106-99-0	54	25	U	55	
Bromomethane	74-83-9	95	25	U	97	
Chloroethane	75-00-3	65	25	U	66	
Ethanol	64-17-5	46	930		1800	
Bromoethene (Vinyl bromide)	593-60-2	107	25	U	110	
Freon 11(Trichlorofluoromethane)	75-69-4	137	25	U	140	
Isopropyl alcohol(2-Propanol)	67-63-0	60	75	U	180	
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	187	25	U	190	
Acetone	67-64-1	58	300		710	
1,1-Dichloroethene	75-35-4	97	25	U	99	
Acetonitrile	75-05-8	41	25	U	42	
Tertiary butyl alcohol (TBA)	75-65-0	74	25	U	76	
Bromoethane (Ethyl bromide)	74-96-4	108	25	U	110	
3-Chloropropene (Allyl chloride)	107-05-1	77	25	U	78	
Carbon disulfide	75-15-0	76	25	U	78	
Methylene chloride	75-09-2	85	75	U	260	
Acrylonitrile	107-13-1	53	25	U	54	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88	25	U	90	
trans-1,2-Dichloroethene	156-60-5	97	25	U	99	
n-Hexane	110-54-3	86	25	U	88	
1,1-Dichloroethane	75-34-3	99	25	U	100	
Vinyl acetate	108-05-4	86	25	U	88	
2-Butanone(MEK)	78-93-3	72	25	U	74	
cis-1,2-Dichloroethene	156-59-2	97	25	U	99	
Ethyl acetate	141-78-6	88	25	U	90	
Chloroform	67-66-3	119	25	U	120	
Tetrahydrofuran	109-99-9	72	25	U	74	
1,1,1-Trichloroethane	71-55-6	133	25	U	140	
Cyclohexane	110-82-7	84	25	U	86	
2,2,4-Trimethylpentane (Isooctane)	540-84-1	114	25	U	120	
Carbon tetrachloride	56-23-5	154	25	U	160	
n-Heptane	142-82-5	100	25	U	100	
1,2-Dichloroethane	107-06-2	99	25	U	100	
Benzene	71-43-2	78	13	J	41	
Trichloroethene	79-01-6	131	25	U	130	
1,2-Dichloropropane	78-87-5	113	25	U	120	
Bromodichloromethane	75-27-4	164	25	U	170	
1,4-Dioxane	123-91-1	88	25	U	90	
4-Methyl-2-pentanone(MIBK)	108-10-1	100	25	U	100	
cis-1,3-Dichloropropene	10061-01-5	111	25	U	110	
Toluene	108-88-3	92	57		210	

VOLATILE ORGANICS DATA ANALYSIS SUMMARY
EPA COMPENDIUM TO-15

Lab Name: EMSL ANALYTICAL
Lab City: WESTMONT, NJ
Instrument ID: 5973-VOA#2
GC Column: RTX-502.2 60m 0.25mm 1.4u
Acquisition Method: 092707TK.M
Calibration Date: 9/27/07
Matrix: Air
Latest MDL Date: 6/29 & 7/6/07
Analyst: MTH

Air Results for Project: 15416
Field ID Number: Inside House-Kitchen
Laboratory ID Number: 280701781-1
Sampling Date: 10/4/07
Lab File ID: k7199.d
Analysis Date: 10/08/07
Time Acquired: 7:12am
Sample Volume(mL): 5
Dilution Factor: 50
Can ID: T2196

Compound	CAS Number	Molecular Weight	Results ppbv	Q	Results ug/m3	
trans-1,3-Dichloropropene	10061-02-6	111	25	U	110	
1,1,2-Trichloroethane	79-00-5	133	25	U	140	
2-Hexanone(MBK)	591-78-6	100	25	U	100	
Tetrachloroethene	127-18-4	166	25	U	170	
Dibromochloromethane	124-48-1	208	25	U	210	
1,2-Dibromoethane	106-93-4	188	25	U	190	
Chlorobenzene	108-90-7	113	25	U	120	
Ethylbenzene	100-41-4	106	25	J	110	
Xylene (para & meta)	1330-20-7	106	130		550	
Xylene (Ortho)	95-47-6	106	24	J	110	
Styrene	100-42-5	104	25	U	110	
Bromoform	75-25-2	253	25	U	260	
1,1,2,2-Tetrachloroethane	79-34-5	168	25	U	170	
4-Ethyltoluene	622-96-8	120	25	U	120	
1,3,5-Trimethylbenzene	108-67-8	120	25	U	120	
2-Chlorotoluene	95-49-8	127	25	U	130	
1,2,4-Trimethylbenzene	95-63-6	120	25	U	120	
1,3-Dichlorobenzene	541-73-1	147	25	U	150	
1,4-Dichlorobenzene	106-46-7	147	25	U	150	
Benzyl chloride	100-44-7	179	25	U	180	
1,2-Dichlorobenzene	95-50-1	147	25	U	150	
1,2,4-Trichlorobenzene	120-82-1	182	25	U	190	
Hexachloro-1,3-butadiene	87-68-3	261	25	U	270	

Surrogate	Result(ppbv)	True(ppbv)	%Recovery	Limits %
4-Bromofluorobenzene	7.90	10.00	79	70 - 130

(NO 'U' IN FIELD) = COMPOUND DETECTED AT REPORTED CONCENTRATION IN PPBV AND UG/M3.

U= UNDETECTED

D = DILUTED. REPORTED FROM DILUTION RUN. VALUE IS ACCURATE.

B= DETECTED IN BLANK

E = ESTIMATED CONCENTRATION. EXCEEDED CALIBRATION LIMIT.

J= DETECTED BELOW PRACTICAL QUANTITATION LEVEL, BUT ABOVE MDL.

VOLATILE ORGANICS DATA ANALYSIS SUMMARY
EPA COMPENDIUM TO-15

Lab Name: EMSL ANALYTICAL
Lab City: WESTMONT, NJ
Instrument ID: 5973-VOA#2
GC Column: RTX-502.2 60m 0.25mm 1.4u
Acquisition Method: 092707TK.M
Calibration Date: 9/27/07
Matrix: Air
Latest MDL Date: 6/29 & 7/6/07
Analyst: MTH

Air Results for Project: 15416
Field ID Number: Garage
Laboratory ID Number: 280701781-2
Sampling Date: 10/4/07
Lab File ID: k7201.d
Analysis Date: 10/08/07
Time Acquired: 8:55am
Sample Volume(mL): 5
Dilution Factor: 50
Can ID: T2113

Compound	CAS Number	Molecular Weight	Results ppbv	Q	Results ug/m3	
Propylene	115-07-1	42	50	U	86	
Freon 12(Dichlorodifluoromethane)	75-71-8	121	25	U	120	
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	171	25	U	170	
Chloromethane	74-87-3	50	25	U	52	
Vinyl chloride	75-01-4	63	25	U	64	
1,3-Butadiene	106-99-0	54	25	U	55	
Bromomethane	74-83-9	95	25	U	97	
Chloroethane	75-00-3	65	25	U	66	
Ethanol	64-17-5	46	1400		2700	
Bromoethene (Vinyl bromide)	106-90-2	107	25	U	110	
Freon 11(Trichlorofluoromethane)	75-69-4	137	25	U	140	
Isopropyl alcohol(2-Propanol)	67-63-0	60	75	U	130	
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	187	25	U	190	
Acetone	67-64-1	58	150	U	360	
1,1-Dichloroethene	75-35-4	97	25	U	99	
Acetonitrile	75-05-8	41	25	U	42	
Tertiary butyl alcohol (TBA)	75-65-0	74	25	U	76	
Bromoethane (Ethyl bromide)	74-96-4	108	25	U	110	
3-Chloropropene (Allyl chloride)	107-05-1	77	25	U	78	
Carbon disulfide	75-15-0	76	25	U	78	
Methylene chloride	75-09-2	85	75	U	260	
Acrylonitrile	107-13-1	53	25	U	54	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88	25	U	90	
trans-1,2-Dichloroethene	156-60-5	97	25	U	99	
n-Hexane	110-54-3	86	25	U	88	
1,1-Dichloroethane	75-34-3	99	25	U	100	
Vinyl acetate	108-05-4	86	25	U	88	
2-Butanone(MEK)	78-93-3	72	25	U	74	
cis-1,2-Dichloroethene	156-59-2	97	25	U	99	
Ethyl acetate	141-78-6	88	25	U	90	
Chloroform	67-66-3	119	25	U	120	
Tetrahydrofuran	109-99-9	72	25	U	74	
1,1,1-Trichloroethane	71-55-6	133	25	U	140	
Cyclohexane	110-82-7	84	25	U	86	
2,2,4-Trimethylpentane (Isooctane)	540-84-1	114	25	U	120	
Carbon tetrachloride	56-23-5	154	25	U	160	
n-Heptane	142-82-5	100	25	U	100	
1,2-Dichloroethane	107-06-2	99	25	U	100	
Benzene	71-43-2	78	22	J	70	
Trichloroethene	79-01-6	131	25	U	130	
1,2-Dichloropropane	78-87-5	113	25	U	120	
Bromodichloromethane	75-27-4	164	25	U	170	
1,4-Dioxane	123-91-1	88	25	U	90	
4-Methyl-2-pentanone(MIBK)	108-10-1	100	25	U	100	
cis-1,3-Dichloropropene	10061-01-5	111	25	U	110	
Toluene	108-88-3	92	89		340	

VOLATILE ORGANICS DATA ANALYSIS SUMMARY
EPA COMPENDIUM TO-15

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Dibromochloromethane	124-48-1	208	25	U	210	
1,2-Dibromoethane	106-93-4	188	25	U	190	
Chlorobenzene	108-90-7	113	25	U	120	
Ethylbenzene	100-41-4	106	46		200	
Xylene (para & meta)	1330-20-7	106	300		1200	
Xylene (Ortho)	95-47-6	106	59		200	
Styrene	100-42-5	104	25	U	110	
Bromoform	75-25-2	253	25	U	260	
1,1,2,2-Tetrachloroethane	79-34-5	168	25	U	170	
4-Ethyltoluene	622-96-8	120	25	U	120	
1,3,5-Trimethylbenzene	108-67-8	120	25	U	120	
2-Chlorotoluene	95-49-8	127	25	U	130	
1,2,4-Trimethylbenzene	95-63-6	120	25	U	120	
1,3-Dichlorobenzene	541-73-1	147	25	U	150	
1,4-Dichlorobenzene	106-46-7	147	25	U	150	
Benzyl chloride	100-44-7	179	25	U	180	
1,2-Dichlorobenzene	95-50-1	147	25	U	150	
1,2,4-Trichlorobenzene	120-82-1	182	25	U	190	
Hexachloro-1,3-butadiene	87-68-3	261	25	U	270	

Surrogate	Result(ppbv)	True(ppbv)	%Recovery	Limits %
4-Bromofluorobenzene	8.12	10.00	81	70 - 130

(NO 'U' IN FIELD) = COMPOUND DETECTED AT REPORTED CONCENTRATION IN PPBV AND UG/M3.

U= UNDETECTED

D = DILUTED. REPORTED FROM DILUTION RUN. VALUE IS ACCURATE.

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VOLATILE ORGANICS DATA ANALYSIS SUMMARY
EPA COMPENDIUM TO-15

Lab Name: EMSL ANALYTICAL
Lab City: WESTMONT, NJ
Instrument ID: 5973-VOA#2
GC Column: RTX-502.2 60m 0.25mm 1.4u
Acquisition Method: 092707TK.M
Calibration Date: 9/27/07
Matrix: Air
Latest MDL Date: 6/29 & 7/6/07
Analyst: MTH

Air Results for Project: 15416
Field ID Number: Outside Air
Laboratory ID Number: 280701781-3
Sampling Date: 10/4/07
Lab File ID: K7203.d
Analysis Date: 10/08/07
Time Acquired: 10:39am
Sample Volume(mL): 5
Dilution Factor: 50
Can ID: T2221

Compound	CAS Number	Molecular Weight	Results ppbv	Q	Results ug/m3	
Propylene	115-07-1	42	50	U	86	
Freon 12(Dichlorodifluoromethane)	75-71-8	121	25	U	120	
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	171	25	U	170	
Chloromethane	74-87-3	50	25	U	52	
Vinyl chloride	75-01-4	63	25	U	64	
1,3-Butadiene	106-99-0	54	25	U	55	
Bromomethane	74-83-9	95	25	U	97	
Chloroethane	75-00-3	65	25	U	66	
Ethanol	64-17-5	46	75	U	140	
Bromoethene (Vinyl bromide)	593-60-2	107	25	U	110	
Freon 11(Trichlorofluoromethane)	75-69-4	137	25	U	130	
Isopropyl alcohol(2-Propanol)	67-63-0	60	75	U	130	
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	197	25	U	190	
Acetone	67-64-1	58	150	U	360	
1,1-Dichloroethene	75-35-4	97	25	U	99	
Acetonitrile	75-05-8	41	25	U	42	
Tertiary butyl alcohol (TBA)	75-65-0	74	25	U	76	
Bromoethane (Ethyl bromide)	74-96-4	108	25	U	110	
3-Chloropropene (Allyl chloride)	107-05-1	77	25	U	78	
Carbon disulfide	75-15-0	76	25	U	78	
Methylene chloride	75-09-2	85	75	U	260	
Acrylonitrile	107-13-1	53	25	U	54	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88	25	U	90	
trans-1,2-Dichloroethene	156-60-5	97	25	U	99	
n-Hexane	110-54-3	86	25	U	88	
1,1-Dichloroethane	75-34-3	99	25	U	100	
Vinyl acetate	108-05-4	86	25	U	88	
2-Butanone(MEK)	78-93-3	72	25	U	74	
cis-1,2-Dichloroethene	156-59-2	97	25	U	99	
Ethyl acetate	141-78-6	88	25	U	90	
Chloroform	67-66-3	119	25	U	120	
Tetrahydrofuran	109-99-9	72	25	U	74	
1,1,1-Trichloroethane	71-55-6	133	25	U	140	
Cyclohexane	110-82-7	84	25	U	86	
2,2,4-Trimethylpentane (Isooctane)	540-84-1	114	25	U	120	
Carbon tetrachloride	56-23-5	154	25	U	160	
n-Heptane	142-82-5	100	25	U	100	
1,2-Dichloroethane	107-06-2	99	25	U	100	
Benzene	71-43-2	78	25	U	80	
Trichloroethene	79-01-6	131	25	U	130	
1,2-Dichloropropane	78-87-5	113	25	U	120	
Bromodichloromethane	75-27-4	164	25	U	170	
1,4-Dioxane	123-91-1	88	25	U	90	
4-Methyl-2-pentanone(MIBK)	108-10-1	100	25	U	100	
cis-1,3-Dichloropropene	10061-01-5	111	25	U	110	
Toluene	108-88-3	92	25	U	94	

VOLATILE ORGANICS DATA ANALYSIS SUMMARY
EPA COMPENDIUM TO-15

Lab Name:	EMSL ANALYTICAL	Air Results for Project:	15416
Lab City:	WESTMONT, NJ	Field ID Number:	Outside Air
Instrument ID:	5973-VOA#2	Laboratory ID Number:	280701781-3
GC Column:	RTX-502.2 60m 0.25mm 1.4u	Sampling Date:	10/4/07
Acquisition Method:	092707TK.M	Lab File ID:	k7203.d
Calibration Date:	9/27/07	Analysis Date:	10/08/07
Matrix:	Air	Time Acquired:	10:39am
Latest MDL Date:	6/29 & 7/6/07	Sample Volume(mL):	5
Analyst:	MTH	Dilution Factor:	50
		Can ID:	T2221

Compound	CAS Number	Molecular Weight	Results ppbv	Q	Results ug/m3	
trans-1,3-Dichloropropene	10061-02-6	111	25	U	110	
1,1,2-Trichloroethane	79-00-5	133	25	U	140	
2-Hexanone(MBK)	591-78-6	100	25	U	100	
Tetrachloroethene	127-18-4	166	25	U	170	
Dibromochloromethane	124-48-1	208	25	U	210	
1,2-Dibromoethane	106-93-4	188	25	U	190	
Chlorobenzene	108-90-7	113	25	U	120	
Ethylbenzene	100-41-4	106	25	U	110	
Xylene (para & meta)	1330-20-7	106	25	U	110	
Xylene (ortho)	95-47-3	106	25	U	110	
Styrene	100-42-5	104	25	U	110	
Bromoform	75-25-2	253	25	U	260	
1,1,2,2-Tetrachloroethane	79-34-5	163	25	U	170	
4-Ethyltoluene	622-96-8	120	25	U	120	
1,3,5-Trimethylbenzene	108-67-8	120	25	U	120	
2-Chlorotoluene	95-49-8	127	25	U	130	
1,2,4-Trimethylbenzene	95-63-6	120	25	U	120	
1,3-Dichlorobenzene	541-73-1	147	25	U	150	
1,4-Dichlorobenzene	106-46-7	147	25	U	150	
Benzyl chloride	100-44-7	179	25	U	180	
1,2-Dichlorobenzene	95-50-1	147	25	U	150	
1,2,4-Trichlorobenzene	120-82-1	182	25	U	190	
Hexachloro-1,3-butadiene	87-68-3	261	25	U	270	

Surrogate	Result(ppbv)	True(ppbv)	%Recovery	Limits %
4-Bromofluorobenzene	7.73	10.00	77	70 - 130

(NO 'U' IN FIELD) = COMPOUND DETECTED AT REPORTED CONCENTRATION IN PPBV AND UG/M3.

U= UNDETECTED

D = DILUTED. REPORTED FROM DILUTION RUN. VALUE IS ACCURATE.

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E = ESTIMATED CONCENTRATION. EXCEEDED CALIBRATION LIMIT.

J= DETECTED BELOW PRACTICAL QUANTITATION LEVEL, BUT ABOVE MDL

EMSL ANALYTICAL, INC.
107 Haddon Avenue
Westmont, New Jersey 08108
856-858-4800 Extension 1301
856-858-3502 Fax or
mhowley@emsl.com or syanetten@emsl.com

External

EMSL Project #

PO#

Chain of Custody / Analysis Request Form

Note: Please complete all required information. Incomplete shaded areas may hinder processing samples.

Project Name: 15416

(Weather conditions (if known): Bar. Pressure:

Temp.: 71°F % Humidity:

Custody and Sample Information - Print ALL information. Write N/A in blanks not applicable.

1. Report to:

ROHIT BALI
ECS Carolina, LLP
9001 Glenwood Ave
Raleigh NC 27617

2. Bill To:

Same as 1

Contact Person

Name: ROHIT BALI

E-mail: rbali@ecslimited.com

Tel #: 919-861-9910

FAX #: 919-861-9911

Sample Shipping and Transport Notice

The individual signing this document to relinquish the samples is indicating that the sample is being shipped in compliance with all applicable local, state or Federal as well as international laws, regulations and ordinances. EMSL Analytical Inc. assumes no liability with respect to sampling, handling or shipping of the samples included in this shipment. The relinquishing signature in addition indicates agreement to hold harmless, defend and indemnify EMSL Analytical Inc. against any claim, demand, or action, related to the sampling, handling or shipping of samples. Call the DOT Hotline at (800) 457-4922 for questions about regulations.

3. Sampled by (Signature)

4. # of Samples in Shipment

5. Date of Sample Shipment

6. Date/Time Results Needed

Item #	Lab Sample ID	Canister ID	Client Sample ID	Sampling Date / Time		Sampling Date / Time		Regulator ID	Analyses Requested	Field Test Values (ppm)	Canister / Vacuum		
				Start	Stop	Start	Stop				Initial "Hg	Final "Hg	Receipt "Hg
1		T2196	Inside House-Kitchen	10-4-07	8:35	10-4-07	4:45pm	72-1537	TO-15		-30		-30
2		T2113	Garage	10-4-07	8:40	10-4-07	4:50pm	72-1548	TO-15	house	-30		-1.9
3		T2221	Outside Air	10-4-07	8:45	10-4-07	4:55pm	72-1536	TO-15				-1.7
4													
5													
6													

Sample Type: ☒ Indoor Air Quality ☐ Soil Gas ☐ Vent Gas ☐ Other

Do you want your results e-mailed?

☒ Yes ☐ No

Library Search needed: ☐ Yes ☒ No, required if you will need help interpreting your report.

Relinquished by (print/sign):

Keith Russell

Keith Russell

Company: EMSL

Date/Time

10/1/07

1656

Affixed Custody Seal No.

1949

Received by (print/sign):

ROHIT BALI

ROHIT BALI

Company: ECS

Date/Time

10/3/07

1100

Was Custody Seal Broken? ☐ Yes ☒ No

Relinquished by (print/sign):

ROHIT BALI

ROHIT BALI

Company: ECS

Date/Time

10/4/07

1500

Affixed Custody Seal No.

1950

Received by (print/sign):

DAN R. HAN

DAN R. HAN

Company: EMSL

Date/Time

Affixed Custody Seal No.

Relinquished by (print/sign):

Received by (print/sign):

Relinquished by (print/sign):

Received by (print/sign):

Keith Russell

Keith Russell

Company: EMSL

Date/Time

10/1/07

1200

Was Custody Seal Broken? ☐ Yes ☐ No

Please indicate Turn

Standard 5-10 Days*

*96-Hour

*72-Hour

*24-Hour

*12-Hour

*6-Hour

Around Time needed:

*TAT subject to laboratory workload. A limited amount of 5 day TAT can be accepted by laboratory

Comments:

Please indicate reporting requirements:

1) Results only

2) Data (with or without requirements)

Snavely, Keith

From: Keith Snavely [Keith.Snavely@ncmail.net]
Sent: Monday, October 15, 2007 10:12 AM
To: Skalka, Rosemary
Subject: Re: Soil Tests on 20 Additional Driveways in Twin Lakes

Rosemary,

Yes, as far as the indoor testing goes, I would like hold off until the soil sampling is completed for these homes. These homes may have levels (hopefully none) of xylene in soil that require no further action. That is what we are hoping will be the case. Thanks for the information. I will provide you (K B Homes) a comment letter of the 223 Rope Walk Court Property assessment once I have reviewed the assessment report.

Thanks for your assistance,
Keith

Skalka, Rosemary wrote:

>
> Keith ,
>
>
>
> Per my conversation with you yesterday, below is the list of 20
> additional driveways in our Twin Lakes community in Cary , which we
> have identified were potentially stripped with Xylene. I have also
> attached a map of the community, with the lots highlighted. We have
> checked our records, and these driveways were repaired and likely
> treated with the xylene as recently as 8/07 and as far back as 12/06.
>
>
>
> Per our conversation, I have notified Ryan Conchilla at ECS, that you
> advised he provide an action plan letter to you for sampling the soil
> adjacent to these driveways, so that he can proceed with the sampling
> this week.
>
>
>
> Also per our conversation, I did not request that he plan to do any
> air quality testing related to these properties at this time, correct?
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> * LOT * * *
>
>
>
> * Address *
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> 21
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> 504 Tranquil Sound Drive
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> 518 Tranquil Sound Drive
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> 30
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> 524 Tranquil Sound Drive
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> 220
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> 402 Otter Cliff Way
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> 226
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> 549 Front Ridge drive
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> 553 Front Ridge drive
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> 554 Front Ridge drive
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> 230
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> 552 Front Ridge drive
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> 538 Front Ridge drive
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> 322
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> 646 Piper Stream Circle

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> 323
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> 644 Piper Stream Circle
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> 505
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> 112 Singer Way
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> 535
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> 404 Elm Farm Place
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> 538
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> 403 Elm Farm Place
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> 548
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> 555 Abbey Fields Loop
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> 556 Abbey Fields Loop
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> 540 Abbey Fields Loop
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> 530 Abbey Fields Loop
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> 564
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> 528 Abbey Fields Loop
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> 569
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> 516 Abbey Fields Loop
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>
> Please let me know if you need anything else from me. Thank you.
>
>
>
>
>
> */ Rosemary Skalka /*
>
> */ Director of Customer Service /*
>
> */ KB Home / Raleigh /*
>
> */ (919) 424-1680 (office) /*
>
> */ (919) 669-9687 (mobile) /*
>
> */ rskalka@kbhome.com <mailto:rskalka@kbhome.com> /*
>
> */ /*
>
>
>

Snavely, Keith

From: Skalka, Rosemary [rskalka@kbhome.com]
Sent: Saturday, October 13, 2007 8:49 PM
To: <keith.snavely@ncmail.net>
Subject: Soil Tests on 20 Additional Driveways in Twin Lakes
Attachments: KB Home - Twin Lakes Community.pdf

Keith,

Per my conversation with you yesterday, below is the list of 20 additional driveways in our Twin Lakes community in Cary, which we have identified were potentially stripped with Xylene. I have also attached a map of the community, with the lots highlighted. We have checked our records, and these driveways were repaired and likely treated with the xylene as recently as 8/07 and as far back as 12/06.

Per our conversation, I have notified Ryan Conchilla at ECS, that you advised he provide an action plan letter to you for sampling the soil adjacent to these driveways, so that he can proceed with the sampling this week.

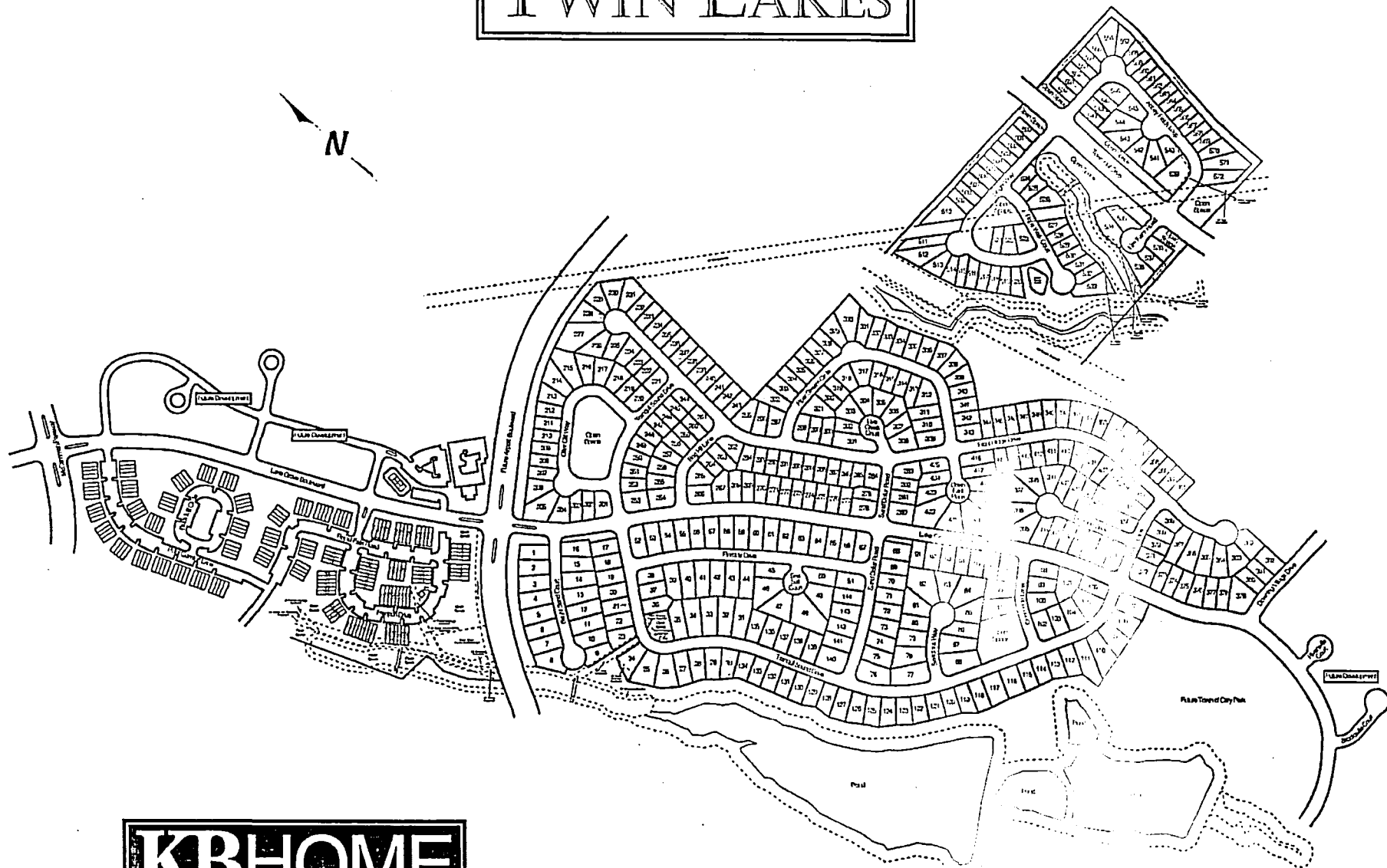
Also per our conversation, I did not request that he plan to do any air quality testing related to these properties at this time, correct?

<u>LOT</u>	<u>Address</u>
21	504 Tranquil Sound Drive
27	518 Tranquil Sound Drive
30	524 Tranquil Sound Drive
220	402 Otter Cliff Way
226	549 Front Ridge drive
228	553 Front Ridge drive
229	554 Front Ridge drive
230	552 Front Ridge drive
237	538 Front Ridge drive
322	646 Piper Stream Circle
323	644 Piper Stream Circle
505	112 Singer Way
535	404 Elm Farm Place
538	403 Elm Farm Place
548	555 Abbey Fields Loop
551	556 Abbey Fields Loop
558	540 Abbey Fields Loop
563	530 Abbey Fields Loop
564	528 Abbey Fields Loop
569	516 Abbey Fields Loop

Please let me know if you need anything else from me. Thank you.

Rosemary Skalka
Director of Customer Service
KB Home / Raleigh
(919) 424-1680 (office)
(919) 669-9687 (mobile)
rskalka@kbhome.com

TWIN LAKES



KBHOME



Copyright © 2006 KB HOME. All Rights Reserved. Prices/terms subject to change, prior sale, lot premiums and/or predetermined options. Floorplans, options, elevations and views vary by community and are not guaranteed. Restrictions and limitations may apply. See Agent for details. Map not to scale.

Snavely, Keith

From: Cathy Cralle Jones [cathy@attybryanbrice.com]
Sent: Wednesday, October 10, 2007 1:18 PM
To: <keith.snavely@ncmail.net>
Subject: Knitchel: Site Assessment Report (223 Rope Walk Court, Morrisville)

Keith – Thanks for the update. I look forward to hearing from you when you get the report and the sample results back.

Cathy

Catherine Cralle Jones, Esq.
Law Office of F. Bryan Brice, Jr.
19 W. Hargett St., Suite 600
Raleigh, NC 27601
(919) 754-1600

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> Raleigh , NC 27617
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> 919.861.9910 (Switchboard)
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> 919.861.9861 (Direct)
>
> 919.861.9911 (Fax)
>
> 919.291.9200 (Cell)
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> /*/ -Frank A. Clark /*/
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>
>

Snavely, Keith

From: SMBrown [SMBrown@ecslimited.com]
Sent: Wednesday, October 10, 2007 12:59 PM
To: <Keith.Snavely@ncmail.net>
Subject: Re: RG Exceedances

Ropewalk Court

Mark Brown, LG, PG, RSM
Principal Geologist
Environmental Services Department Manager

ECS Carolinas LLP
9001 Glenwood Ave.
Raleigh, NC 27617-7505
919.861.9910 (work)
919.861.9861 (direct)
919.291.9200 (cell)

www.ecslimited.com

Sent from my BlackBerry Wireless Device

-----Original Message-----

From: Keith Snavely <Keith.Snavely@ncmail.net>
To: SMBrown <SMBrown@ecslimited.com>
Sent: Wed Oct 10 12:57:46 2007
Subject: Re: RG Exceedances

Mark,

It would depend on the compound and its concentration. Is it a soil or groundwater contaminant? Our toxicologist can probably calculate a cleanup level for the contaminant of concern and then I could let you know. If something shows up just note it as detected. Are you referring to the 223 Rope Walk court data or is this a question on an REC site? If REC, I would call Kim Caulk unless the REC guidelines give a formula. I still think it would need to be run through Hanna Assefa our toxicologist. If you need more clarification let me know.

Keith

SMBrown wrote:

>
> Do you consider a detection without an established RG a reportable
> exceedance?
>
>
>
> ** Mark Brown, LG, PG, RSM **
>
> // Principal Geologist //
>
> Environmental Services Department Manager
>

> /*/ -Frank A. Clark /*/
>
>
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>
>
>

Snavely, Keith

From: Keith Snavely [Keith.Snavely@ncmail.net]
Sent: Wednesday, October 10, 2007 12:58 PM
To: SMBrown
Subject: Re: RG Exceedances

DATE FILE

Mark,

It would depend on the compound and its concentration. Is it a soil or groundwater contaminant? Our toxicologist can probably calculate a cleanup level for the contaminant of concern and then I could let you know. If something shows up just note it as detected. Are you referring to the 223 Rope Walk court data or is this a question on an REC site? If REC, I would call Kim Caulk unless the REC guidelines give a formula. I still think it would need to be run through Hanna Assefa our toxicologist. If you need more clarification let me know.

Keith

SMBrown wrote:

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> ** Mark Brown, LG, PG, RSM **
>
> // Principal Geologist //
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> Environmental Services Department Manager
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> anywhere!" /*/
>

Snavely, Keith

From: RConchilla [RConchilla@ecslimited.com]
Sent: Tuesday, October 09, 2007 5:12 PM
To: Keith Snavely
Subject: RE: 223 rope walk ct

ATTACH FILE

Keith,

Got you voice mail. ECS collected two soil samples from behind the residence up the street from the Knichel location. Both soil samples were Below detection limits (and that residence is unoccupied).

When I have the full results, I will contact you.

Ryan J. Conchilla
Senior Environmental Scientist
Phase I Team Leader
ECS Carolinas, LLP
9001 Glenwood Avenue
Raleigh, NC 27617-7505
(919) 861-9862 (direct voice)
(919) 291-5744 (mobile)
(919) 861-9910 (office)
(919) 861-9911 (office fax)
email: rconchilla@ecslimited.com

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ENR #96 Top Design Firm
ENR #177 Top Environmental Firm

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-----Original Message-----

From: Keith Snavely [mailto:Keith.Snavely@ncmail.net]
Sent: Tuesday, October 02, 2007 07:12 pm
To: RConchilla
Subject: 223 rope walk ct

Ryan,

As a follow-up to our conversation this morning and my review of the Preliminary Work Plan for sampling at the 223 Rope Walk Ct site here are

the commnnts and the areas of concern that we discussed
Please not the information I have included at the bottom of the email in

item #9. We do want you to move forward with the indoor sampling. We

would prefer not to collect samples outside with the exception of the background samples, but inside the Home. I am now agreeing with you that

the residents are going to want to know if the odors are present in the home or not. One other item we did not discuss, is the possibility of groundwater sampling. Even though we may be below cleanup levels depending on the amount of xylenes used it may be a concern. Let's first

see what the soils show.

1) The soils on the west and east side of the concrete driveway will be considered as AOC-1

2) The area of minimal stockpile soil south of the house or in its backyard is AOC-5,

3) The areas of concern are now as follows:

AOC-1 Soils on the west and east sides of the concrete driveway

AOC-2 Drainage feature between 221 and 223 Ropewalk court

AOC-3 Apparent fill area located on the southern side of the cul-del-sac

west of 223 Rope Walk Court

AOC-4 Surface water located at southeast end of the 223 Ropewalk Court.

AOC-5 Stockpile of soil in the backyard or southeast of 223 Rope walk Court.

4) At a minimum 4 soil samples shall be collected in each AOC.

5) ESC LTD will sample the soils that are stockpiled and located at Yard

Nique to determine where these soils need to be taken for disposal.

6) There should be some samples collected at a depth of 2 feet below ground surface, specifically where volatiles are detected with depth.

7) If the water line from the house to the meter on Rope walk Ct is located in the area adjacent to (hopefully not below the driveway) the driveway collect some samples along this line. I have a concern that if a large quantity of xylene were used it could dissolve PVC pipe.

8) Collect samples at the house on the corner of Rope walk Ct and Singer

Way. Record this property as a separate site using its address for the site name if we find xylenes in this soil as well.

9) In regards to indoor air sampling, I had a chance this evening to discuss this issue with our Branch head, Charlotte Jesneck. She suggested we go ahead and collect air samples, but definitely in the house, not outside I guess with the exceptions of background. She agreed

with you thoughts about the couple wanting to know what was being done and what levels if any are present in the house. Can you get a key to their home through KB Homes and set the cannisters in the house as you suggested? I have also cut and pasted some of our guidance that we would like to see you follow as well. Let me know if you have any questions.

Note: We are taking these samples with the understanding that other

contaminants may exist in the house that may also show up in the air samples that may or may not be related to the xylene release.

Info for Indoor air sampling:

/Crawlspace and Indoor Air Testing:/

Crawlspace and indoor air samples must be collected when the average highs are less than 60 degrees. Generally that means mid-Nov through mid-Mar for the mountains and upper piedmont and mid-Dec through mid-Feb

for the lower Piedmont and coastal plain. Note that in areas where the depth to groundwater varies greatly during the year, you may also want to sample when the water table is high.

Crawlspace and indoor air samples should be accompanied by outdoor background samples collected 5-15 ft upwind from the structure. Background sample collection should begin 1 hr prior to, and continue through, the collection period for the samples at the structure. These concentrations may be subtracted from the sample concentrations before comparison to screening numbers.

A 2-hour minimum sample run is required.

Allow no use of exhaust fans, clothes dryers, fireplaces and other items that may induce pressure changes during crawlspace and indoor air sampling.

Houses/crawlspaces should be surveyed for background sources and such sources must be removed where possible. Any sources of contamination that can not be removed should be noted. For indoor air testing, the house should be well ventilated to remove the vapors from the background

sources. Windows should then remain closed 12-24 hours prior to indoor air sampling.

Summa canisters must be used for all VOC testing. Summa canisters should have pressure gauges. Summa canister and flowmeter /should be/ "100% certified" and not "batch certified." Sampler should obtain tubing and connections from laboratory supplying flowmeter and canister. Specify only Swagelok fittings and Teflon tubing.

Additional Helpful References:

Whole Air Guide to Sampling and Analysis available at Airtoxics.com

_Guidance for Evaluating Soil Vapor Intrusion in the State of __New York_ (in particular Section 2) available at www.health.state.ny.us/environmental/indoors/vapor_intrusion/index.html.

I think I covered what we discussed. Let me know if there is anything else. My office number is 508-8479. I will not be in until about 9:00 am. Leave a message and I will get back with you.

Thanks for your prompt action,

Keith

Snavely, Keith

From: Keith Snavely [Keith.Snavely@ncmail.net]
Sent: Tuesday, October 02, 2007 7:12 PM
To: rconchilla
Subject: 223 rope walk ct

Ryan,

As a follow-up to our conversation this morning and my review of the Preliminary Work Plan for sampling at the 223 Rope Walk Ct site here are the comments and the areas of concern that we discussed. Please note the information I have included at the bottom of the email in item #9. We do want you to move forward with the indoor sampling. We would prefer not to collect samples outside with the exception of the background samples, but inside the Home. I am now agreeing with you that the residents are going to want to know if the odors are present in the home or not. One other item we did not discuss, is the possibility of groundwater sampling. Even though we may be below cleanup levels depending on the amount of xylenes used it may be a concern. Let's first see what the soils show.

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AOC-5 Stockpile of soil in the backyard or southeast of 223 Rope walk Court.

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- 5) ESC LTD will sample the soils that are stockpiled and located at Yard Nique to determine where these soils need to be taken for disposal.
- 6) There should be some samples collected at a depth of 2 feet below ground surface, specifically where volatiles are detected with depth.
- 7) If the water line from the house to the meter on Rope walk Ct is located in the area adjacent to (hopefully not below the driveway) the driveway collect some samples along this line. I have a concern that if a large quantity of xylene were used it could dissolve PVC pipe.
- 8) Collect samples at the house on the corner of Rope walk Ct and Singer Way. Record this property as a separate site using its address for the site name if we find xylenes in this soil as well.
- 9) In regards to indoor air sampling, I had a chance this evening to discuss this issue with our Branch head, Charlotte Jesneck. She suggested we go ahead and collect air samples, but definitely in the house, not outside I guess with the exceptions of background. She agreed with your thoughts about the couple wanting to know what was being done and what levels if any are present in the house. Can you get a key to their home through KB Homes and set the

cannisters in the house as you suggested? I have also cut and pasted some of our guidance that we would like to see you follow as well. Let me know if you have any questions.

Note: We are taking these samples with the understanding that other contaminants may exist in the house that may also show up in the air samples that may or may not be related to the xylene release.

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/Crawlspace and Indoor Air Testing:/

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A 2-hour minimum sample run is required.

Allow no use of exhaust fans, clothes dryers, fireplaces and other items that may induce pressure changes during crawlspace and indoor air sampling.

Houses/crawlspaces should be surveyed for background sources and such sources must be removed where possible. Any sources of contamination that can not be removed should be noted. For indoor air testing, the house should be well ventilated to remove the vapors from the background sources. Windows should then remain closed 12-24 hours prior to indoor air sampling.

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Additional Helpful References:

Whole Air Guide to Sampling and Analysis available at Airtoxics.com

Guidance for Evaluating Soil Vapor Intrusion in the State of New York (in particular Section 2) available at www.health.state.ny.us/environmental/indoors/vapor_intrusion/index.html.

I think I covered what we discussed. Let me know if there is anything else. My office number is 508-8479. I will not be in until about 9:00 am. Leave a message and I will get back with you.

Thanks for your prompt action,

Keith

• *Explain the importance of the*

• *Explain the importance of the*

Snavely, Keith

From: RConchilla [RConchilla@ecslimited.com]
Sent: Monday, October 01, 2007 4:42 PM
To: <keith.snavely@ncmail.net>
Subject: Work Plan- Xylene
Attachments: Work Plan_rev1.pdf; Figures.pdf

Mr. Snavely,

As per your conversation with Mark Brown, please find our Preliminary Work Plan for the Knichel Residence located at 223 Ropewalk Court, Morrisville, NC. We would like to start this work as soon as possible, please contact myself or Mark regarding any questions you may have.

Thank you.

Ryan J. Conchilla

Senior Environmental Scientist

Phase I Team Leader

ECS Carolinas, LLP

9001 Glenwood Avenue

Raleigh, NC 27617-7505

(919) 861-9862 (direct voice)

(919) 291-5744 (mobile)

(919) 861-9910 (office)

(919) 861-9911 (office fax)

email: rconchilla@ecslimited.com

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ECS CAROLINAS, LLP

Geotechnical • Construction Materials • Environmental

October 1, 2007

Mr. Keith Snavely
North Carolina Department of Environment and Natural Resources
Division of Waste Management, Superfund Section
Inactive Hazardous Sites Branch
401 Oberlin Road, Ste. 150
1646 Mail Service Center
Raleigh, NC, 27699-1646

RE: Preliminary Work Plan
Knichel Residence
223 Ropewalk Court
Morrisville, Wake County, North Carolina
ECS Project Number 06.15416

Dear Mr. Snavely:

ECS Carolinas, LLP (ECS), on behalf of KB Home, appreciates the opportunity to submit this Preliminary Work Plan for limited soil and surface water sampling services at the Knichel Residence, 223 Ropewalk Court, Morrisville, Wake County, North Carolina. This Work Plan is provided in response to our discussions via telephone on Tuesday, September 25, 2007 and is prepared in accordance with the North Carolina Department of Environment and Natural Resources, Division of Waste Management, Superfund Section, Inactive Hazardous Sites Branch, (IHSB) *Guidelines for Assessment and Cleanup (Guidelines)*, August 2007.

SCOPE OF SERVICES

On September 24, 2007, ECS personnel visited the residence located at 223 Ropewalk Court, Morrisville, NC with Mr. Darryl Rennells of KB Home (Figures 1 and 2). ECS personnel visited the site due to a request by Mr. Rennells for a xylene application to the driveway of the residence on September 18, 2007. During the site visit, ECS personnel observed multiple areas in the front and back yards which resembled "chemical burns." These areas were located on both sides of the driveway in the front yard, a grass swell located alongside the residence and the backyard (Figure 3).

It is ECS' understanding that Ms. Stephanie Knichel, resident, noted strong petroleum odors on September 18th + 19th and contacted KB Home. KB Home then contacted Yard Nique who excavated soils along side the driveway and hauled them off-site. On September 21, 2007, Mr. Keith Snavely, representative of the North Carolina Department of Environment and Natural Resources, Division of Waste Management, Superfund Section, Inactive Hazardous Sites Branch (IHSB) visited the site. ECS personnel spoke with Mr. Snavely on September 24, 2007 and recommended that five different locations be sampled and analyzed for volatile organic compounds (VOCs).

The principal purpose of the recommended Scope of Services is to submit a Phase I Remediation Investigation (RI) Work Plan in accordance with the IHSB *Guidelines for Assessment and Cleanup (Guidelines)*. This Work Plan discusses the scope of work and methodology for the RI.

The objectives of the RI are: (1) complete the assessment of shallow suspect soils and surface water in the shallow aquifer, (2) identify remedial goals; and (3) compile, evaluate, and present the results of this assessment in the RI Report. To accomplish this, ECS proposes the following tasks:

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**Phase I Remedial Investigation Work Plan
Knichel Residence
223 Ropewalk Court
Morrisville, Wake County, North Carolina
October 1, 2007**

Task 1: Preparation of a Health and Safety Plan

A Health and Safety Plan (HASP) is required by federal law before beginning exploratory work on a site. ECS will prepare a HASP Plan for this project, which is intended to cover ECS personnel for the work outlined in this proposal. Our HASP will not cover others for which ECS is not responsible.

Task 2: Identification of Areas of Concern

Site soil and surface waters appear to have been impacted by VOCs. The general locations where targeted compounds are suspected were based on observations during site visits by Mr. Snavely on September 21, 2007 and ECS personnel on September 26, 2007. Figure 4 presents the five Areas of Concern (AOC). Additional studies are required to delineate the extent of contamination in each AOC that include:

- AOC 1- Soils located adjacent and east of concrete driveway
- AOC 2- Soils located adjacent and west of concrete driveway
- AOC 3- Drainage feature located between two properties (221 and 223 Ropewalk Court)
- AOC 4- Apparent fill area located on eastern side of cul-de-sac
- AOC 5- Surface water located east of property

Task 3: Soil Sampling Event

ECS proposes to collect three-four soil samples in each of four different AOCs identified above. The soil samples will be collected with a stainless-steel hand auger at approximately six to twelve inches below the ground surface (bgs). Soil samples will be collected at various locations and depths and placed into zip-lock bags. The samples will then be allowed time to volatilize and then screened for VOC vapor concentrations in the sample bag headspace using a photo ionization detector (PID). The soil sample with the highest VOC vapor concentration will then be placed into laboratory-provided containers, placed on ice for submittal to a State of North Carolina-certified laboratory for VOC analysis using Environmental Protection Agency (EPA) Method 8260.

Task 4: Surface Water Sampling Event

ECS proposes to collect two surface water samples from the drainage feature located behind the residence. The water samples will be placed into laboratory-supplied containers, placed on ice and submitted to a State of North Carolina-certified laboratory for VOC analysis using EPA Method 8260.

Task 5: Preliminary Wetlands Determination

ECS will perform a cursory wetland and surface waters identification on the subject site that will identify the approximate location of wetlands and streams on the property. Topographic maps, aerial photographs, and infrared aerial photographs will be utilized in the **approximate determination** of wetlands and streams. The **approximate** location of anticipated wetlands will be placed on a map. **Please note that this work does not include delineating wetlands, streams or water bodies; flagging wetlands, streams or water bodies; surveying of streams, wetlands or water bodies; and/or 404/401 wetland and stream permitting.** Additionally, all wetlands, streams, and water body locations on the map should be considered approximations only.

**Phase I Remedial Investigation Work Plan
Knichel Residence
223 Ropewalk Court
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October 1, 2007**

Task 6: Indoor Air Quality Sampling Event

Airborne VOC samples will be collected in three representative areas of the residence using battery operated personal sampling pumps calibrated to approximately 0.4 liters per minute (lpm). Samples will be collected on evacuated canisters, from four to seven feet above the floor, for 480 minutes. Analysis will be conducted by EMSL Analytical Laboratories, located in Weston, New Jersey using NIOSH Method TO-15 (Gas Chromatography/Mass Spectrometry) (TVOC). Results will be reported as total VOC's and will be compared to applicable EPA and European Government recommendations concerning indoor VOC concentrations.

Testing:

TVOCs: Not to exceed 800 ppm
Xylylene
Ethylbenzene

All regulated pollutants and any other pollutants will not exceed the NAAQS or the TLV-TWA for that pollutant.

Once baseline samples are taken a scope of work for the remediation will be written based on the sample data that was collected and analyzed.

Once remediation (if needed) is completed clearance samples can be taken in order to determine if the mold contamination has been removed. These samples will be compared to the baseline samples.

Task 7: Reporting

ECS will provide a Remedial Investigation Report (RI Report) (in accordance with Section 3.0 of the *Guidelines*) to the IHSB. Sample results will be compared to remediation goals (RGs) set forth in the *Guidelines*. The IHSB will determine what steps, if any, will be taken for further assessment or remediation of the site.

CLOSING

Thank you for the opportunity to submit this Preliminary Work Plan and look forward to your prompt approval of our submittal. Please contact us at 919.861.9910, rconchilla@ecslimited.com or smbrown@ecslimited.com with any questions or comments.

Sincerely,

ECS Carolinas, LLP



Ryan Conchilla
Senior Environmental Scientist

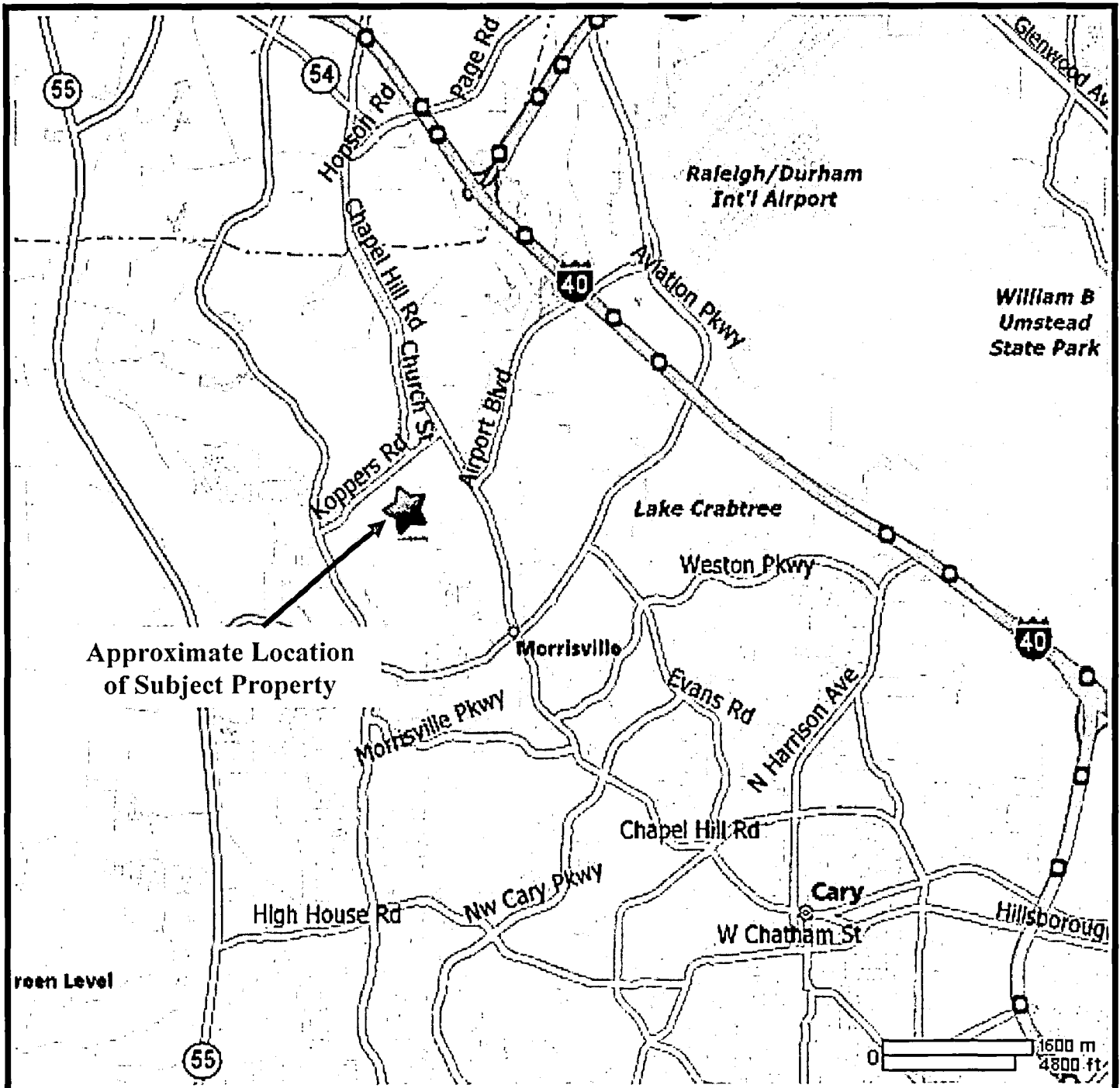



Mark Brown, L.G., P.G., RSM
Principal Geologist
Environmental Services Department Manager

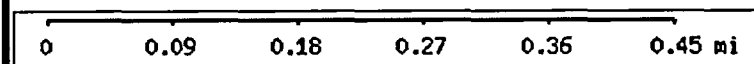
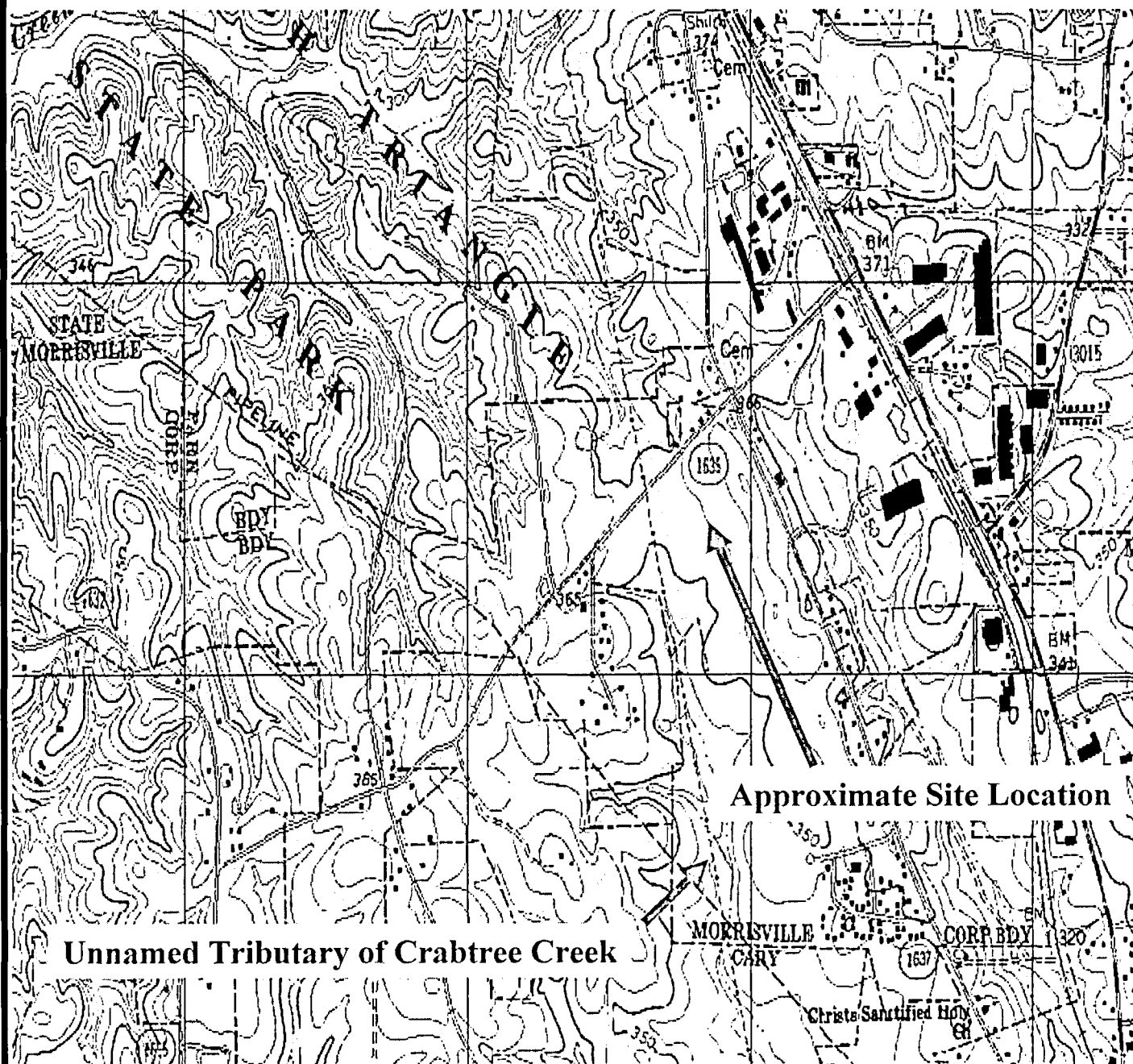
**Phase I Remedial Investigation Work Plan
Knichel Residence
223 Ropewalk Court
Morrisville, Wake County, North Carolina
October 1, 2007**



Attachments:

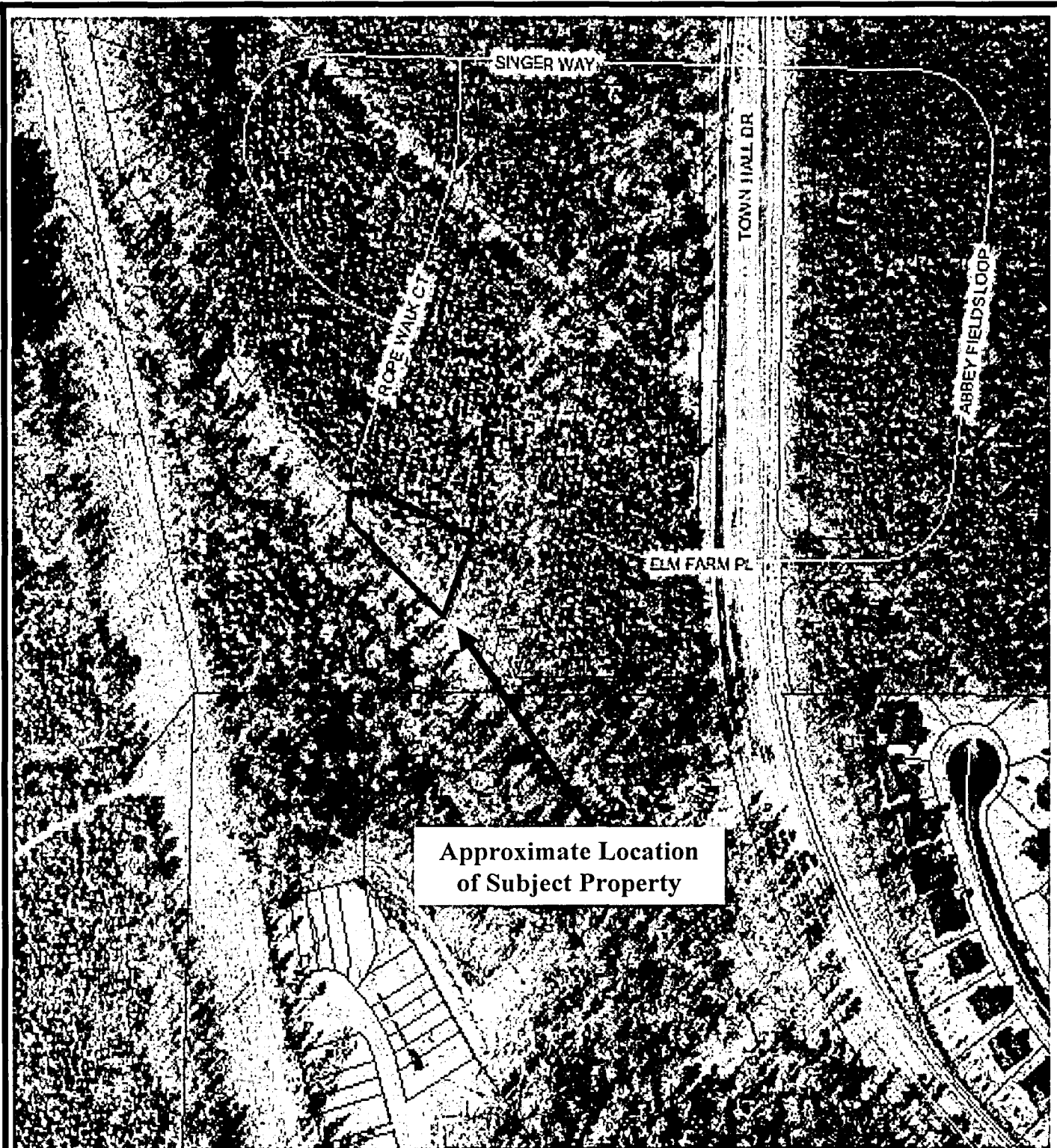
Figure 1	Vicinity Location Map
Figure 2	USGS Topographic Map
Figure 3	2005 Wake County Aerial Photograph
Figure 4	Site Survey Plat with AOC Locations



	<p>N W E S</p> <p>Scale as Illustrated</p>	<p>Vicinity Map 2007 Google Maps</p> <hr/> <p>Phase I Environmental Site Assessment Knichel Residence 223 Ropewalk Court Morrisville, Wake County, North Carolina</p>	<p>Figure No. 1</p> <hr/> <p>ECS Project # 15416</p>
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	 Scale: As Illustrated	<p>Topographic Map 1984 Topozone Cary, North Carolina Quadrangle</p> <p>Phase I Environmental Site Assessment Knichel Residence 223 Ropewalk Court Morrisville, Wake County, North Carolina</p>	<p>Figure No. 2</p> <p>ECS Project # 15416</p>
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Not to Scale

Site Location Map
2005 Aerial Photo
Wake County Online GIS

Phase I Environmental Site Assessment
Knichel Residence
223 Ropewalk Court
Morrisville, Wake County, North Carolina

Figure No.
3

ECS Project #
15416

Snavely, Keith

From: RConchilla [RConchilla@ecslimited.com]
Sent: Monday, September 24, 2007 3:54 PM
To: <keith.snavely@ncmail.net>
Subject: 223 Ropewalk Court

Keith,

It was good talking with you this afternoon. Below is my contact information, I'll be in touch.

Ryan J. Conchilla

Senior Environmental Scientist

Phase I Team Leader

ECS Carolinas, LLP

9001 Glenwood Avenue

Raleigh, NC 27617-7505

(919) 861-9862 (direct voice)

(919) 291-5744 (mobile)

(919) 861-9910 (office)

(919) 861-9911 (office fax)

email: rconchilla@ecslimited.com

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ENR #96 Top Design Firm
ENR #177 Top Environmental Firm

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Snavely, Keith

From: Stephanie Knichel [stephanieknichel@yahoo.com]
Sent: Monday, September 24, 2007 2:57 PM
To: Keith Snavely
Subject: Re: Xylene Contamination

Keith,

The odor has left the house, but we discovered a big pile of the contaminated soil behind my home and it smells outside. Today I fell in the area where they dug up my property and my skin immediately started burning. It was so scary. I hosed it off right away and then took a shower, but it is still irritating my skin. What a mess.

I have been told that they will be sampling my soil today. I want to be sure to get a copy of the reports.

I am hoping you will help me with that. I will come to your office to pick up any paperwork. Thanks again for your concern.

Stephanie Knichel

--- Keith Snavely <Keith.Snavely@ncmail.net> wrote:

> Mrs. Knichel

>

> Thanks for the photos, they will be a big help for me for the
> assessment and cleanup. Sorry I wasn't able to get to them sooner, I
> was out of the office until noon. How are things at the house?

> Has the odor left

> the garage and did the contractors remove the material they used to
> soak up the xylene?

>

> Keith Snavely

>

>

>

> stephanieknichel@yahoo.com wrote:

> >

> > Stephanie has shared photos with you.

> >

> > Click to view my photos

> >

>

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> >

> > *Xylene Contamination*

> > (1 album)

> >

> > Keith,

> > Here are the pictures of the xylene contamination
> that occurred at my

> > home at 223 Rope Walk Court in Morrisville. I have
> put titles under

> > each photo so you would know what you are looking
> at.

> > You do not need to sign in to view the photos,
> just click on the

> > picture on this email, and click on it again when
> you get to the next

> > link.

> > If you need anything further, please call me at
> 919-371-9223, or
> > 917-887-8865.
> > I genuinely thank you for taking this matter so
> seriously and for your
> > immediate response on Friday to our crisis.
> > Regards,
> > Stephanie Knichel
> >
> > - Stephanie
> >
> > View photos
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Moody friends. Drama queens. Your life? Nope! - their life, your story. Play Sims Stories at
Yahoo! Games.
<http://sims.yahoo.com/>

Snavely, Keith

From: Keith Snavely [Keith.Snavely@ncmail.net]
Sent: Monday, September 24, 2007 1:26 PM
To: stephanieknichel
Subject: Re: Xylene Contamination

Mrs. Knichel

Thanks for the photos, they will be a big help for me for the assessment and cleanup. Sorry I wasn't able to get to them sooner, I was out of the office until noon. How are things at the house? Has the odor left the garage and did the contractors remove the material they used to soak up the xylene?

Keith Snavely

stephanieknichel@yahoo.com wrote:

Stephanie has shared photos with you.

Xylene Contamination
(1 album)

Keith,

Here are the pictures of the xylene contamination that occurred at my home at 223 Rope Walk Court in Morrisville. I have put titles under each photo so you would know what you are looking at.

You do not need to sign in to view the photos, just click on the picture on this email, and click on it again when you get to the next link.

If you need anything further, please call me at 919-371-9223, or 917-887-8865.

I genuinely thank you for taking this matter so seriously and for your immediate response on Friday to our crisis.

Regards,

Stephanie Knichel

- Stephanie

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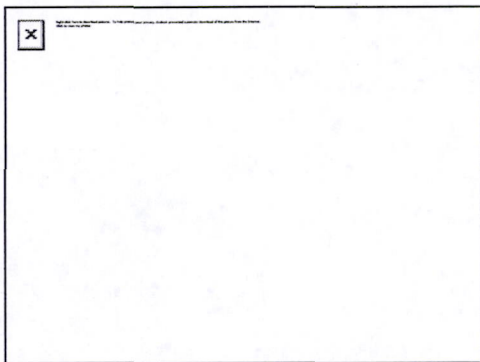
Snavely, Keith

Keith Snavely

From: stephanieknichel [stephanieknichel@yahoo.com]
Sent: Sunday, September 23, 2007 4:07 PM
To: keith.snavely
Subject: Xylene Contamination

*Photos were shared
for viewing but not
accessible for ~~print~~ printing
at our office.
Stephanie has
photos.*

Stephanie has shared photos with you.



Xylene Contamination
(1 album)

Keith,
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Stephanie Knichel

- Stephanie

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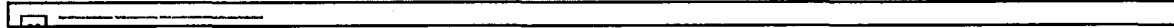
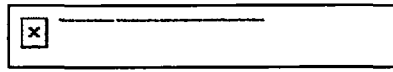


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